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the 1990s, the number of people in the world who are undernourished has increased from 250 million to 800 million. The number of people who are malnourished has increased from 1.2 billion to 2.3 billion. The number of people who are obese has increased from 100 million to 600 million.

The World Health Organization (WHO) has estimated that the number of people who are obese has increased from 100 million in 1975 to 600 million in 2000. The number of people who are obese has increased from 100 million in 1975 to 600 million in 2000. The number of people who are obese has increased from 100 million in 1975 to 600 million in 2000.

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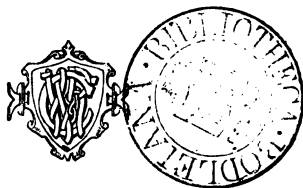
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CHAMBERS'S
ELEMENTARY SCIENCE MANUALS.

LANGUAGE

BY

ANDREW FINDLATER, LL.D.



W. & R. CHAMBERS
LONDON AND EDINBURGH
1875

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PREFACE.

THE vital importance of diffusing some knowledge of the leading principles of Science among all classes of society, is becoming daily more widely and deeply felt ; and to meet and promote this important movement, W. & R. CHAMBERS have resolved on issuing the present Series of ELEMENTARY SCIENCE MANUALS. The Editors believe that they enjoy special facilities for the successful execution of such an undertaking, owing to their long experience—now extending over a period of forty years—in the work of popular education, as well as to their having the co-operation of writers specially qualified to treat the several subjects. In particular, they are happy in having the editorial assistance of ANDREW FINDLATER, LL.D., to whose labours they were so much indebted in the work of editing and preparing *Chambers's Encyclopædia*.

The Manuals of this series are intended to serve two somewhat different purposes :

1. They are designed, in the first place, for SELF-INSTRUCTION, and will present, in a form suitable for private study, the main subjects entering into an enlightened education ; so that young persons in earnest about self-culture may be able to master them for themselves.

2. The other purpose of the Manuals is, to serve as TEXT-BOOKS IN SCHOOLS. The mode of treatment naturally adopted in what is to be studied without a teacher, so far from being a drawback in a school-manual, will, it is believed, be a positive advantage. Instead of a number of abrupt statements being presented, to be taken on

trust and learned, as has been the usual method in school-teaching; the subject is made, as far as possible, to unfold itself gradually, as if the pupil were discovering the principles himself, the chief function of the book being, to bring the materials before him, and to guide him by the shortest road to the discovery. This is now acknowledged to be the only profitable method of acquiring knowledge, whether as regards self-instruction or learning at school.

The subject of the present manual is the SCIENCE OF LANGUAGE. The term is not to be understood as meaning a knowledge of languages for practical use, but the physiology, as it were, of speech in general, and the scientific classification of the various tongues spoken by men. The study of language from this point of view, though of recent origin, possesses an interest that is not confined to learned philologists; and an attempt is here made to present such an outline of the subject as may be intelligible to the ordinary reader. Some knowledge of Latin, French, and German, on the part of the student will be of great advantage; but there is little in the book that he will not be able readily to follow if he have a competent knowledge of his mother-tongue, from which most of the illustrations have been taken.

For simplification in teaching, the subjects are divided into sub-sections or articles, which are numbered continuously; and a series of Questions, in corresponding divisions, are appended. These Questions, while they will enable the private student to test for himself how far he has mastered the several parts of the subject as he proceeds, will serve the teacher of a class as specimens of the more detailed and varied examination to which he should subject his pupils.

EDINBURGH,
July 1875.

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LANGUAGE.

INTRODUCTORY.

1. LANGUAGE, in its widest sense, signifies any means by which one conscious being conveys what it thinks or feels to another. Thus, we speak of the language of the eyes, the language of birds. But in ordinary usage we understand by language the system of sounds uttered by the human voice in the intercourse of society—articulate speech. The writing of language does not alter its character in this respect; it only introduces an intermediate set of signs or marks. The written characters do not convey the meaning directly, they only indicate certain sounds; and it is these sounds that are still the immediate vehicle of the thoughts. It is language in this sense—the communication of our thoughts by means of spoken signs*—that is the subject of the present manual.

2. *Natural Language.*—Human speech is the result of a kind of tacit convention as to the meanings of the several signs, so that they are intelligible only to those who have learned them. Such signs are in this respect *artificial*. But distinct from this there is a kind of *natural* language which is universally understood without being learned, and which the lower animals to some extent possess. It is made up of the instinctive and untaught movements of the body that feelings, passions, and desires give rise to. The screams and

* This is the proper etymological meaning of Language, which is a French word formed from *langue*, the tongue. In classical Latin the word is *lingua*; but the old form was *dینگua*, and with this the English *tongue* is evidently cognate. See page 43.

contortions of pain, the fixed gape of astonishment, the tears of wounded affection, the swellings of rage, the placid repose of contentment, the outburst of the ludicrous, are all peculiar effects on the bodily organs, characteristic of the several feelings, and capable of communicating these feelings at once, and independently of all instruction, from one human being to another. But these signs are by far too limited to express the wide variety of thoughts and sentiments which the human mind can entertain, and which require to be communicated between man and man. Even in its most perfect development, in the stage pantomime or dumb-show, this mode of expression is very obscure when it attempts to convey anything beyond the most obvious ideas and feelings. So far as it goes, however, it is the most powerful means of impressing one man's feelings on another, or of inspiring a multitude with a common enthusiasm; hence it continues to be used along with artificial speech, as is seen in the gestures, grimaces, movements, and modulations of conversation and oratory. It is the resource of children, and of persons ignorant of one another's language; and is partially employed by the deaf and dumb. On this we need not dwell longer, but return to audible speech.

3. *Two purposes in studying Languages.*—We may occupy ourselves with languages for two very different purposes. In most cases, the object in studying a language is to be able to understand it, and to speak and write it. From the time we begin to lisp to the time we leave school or college, and even after, we are chiefly occupied in learning the use of our mother-tongue, or of other living or dead tongues; and until recently, the multitude of dictionaries, grammars, critical commentaries, and the like, that constitute so vast a bulk of the literature of the world, turned almost exclusively on the right understanding, and the correct or elegant use of the individual languages.

But there is another light in which the same subject-matter may be viewed. We may study two or more languages, in order to compare them with one another, and note in what they agree and in what they differ. When a

considerable number of tongues are subjected to this kind of examination, it is found that some features are widely prevalent, while others are confined to a narrower circle, or, it may be, are peculiar to a single tongue. It is the facts thus arrived at by comparison that form what are called the general principles or laws of language—universal grammar—as distinguished from the peculiarities of individual languages. Nor is this the only result of such comparison. It becomes at once evident that any particular tongue differs widely from one set, while it agrees extensively with another; and thus the known languages of the world can be *classified*, in much the same way as minerals, plants, and animals are.

4. *Languages are always changing.*—In this process of comparison we do not take a language as it was spoken at any one date, and confine ourselves to that. Not only are different languages compared with one another, but the same language is compared with itself at different times throughout the period of its known existence. The historical method is thus conjoined with the comparative, and it is this conjunction that has shed the most light on the laws of language. All languages are found to be undergoing incessant change; waste and repair of parts are constantly going on in every individual language, as in a living organism, the result being a gradual change in the aspect and character of the whole, so that, after the lapse of centuries, it shall seem to the superficial observer a new tongue. These changes do not happen by blind chance or caprice; they are found to take place, on the whole, according to discoverable laws. Those laws by which languages become transformed, or developed, as it is called, are among the most important of the general principles of the science.

5. *The Study of Language like Natural History.*—In all this, there is an obvious analogy to the study of natural history. The zoologist, for example, investigates the structure and functions of the different animals, and assigns to each its place in the classification of the animal kingdom. But he has this advantage over the linguist: he can trace

the organism he is investigating from the embryo, through every stage of its development and growth, to its death, and thus give a complete scheme of its life. The student of language, on the contrary, has his survey in the historical direction hemmed in by narrow limits. He has never seen, and can never hope to see a language in embryo; the oldest relics of language that have come down to us are such as to imply centuries on centuries of previous existence; so that he is like a naturalist reduced to study organisms exclusively in the adult state. He is not, however, precluded from all hope of arriving at some notion of the embryo condition of speech. By analysing languages as they exist, and finding the ultimate elements of which the words are built up; and by reasoning from the way in which words are seen to change, and new words to come into use, we may hope to arrive at some conclusions more or less probable as to what the beginnings of language must, or, at all events, may have been. It is this speculation as to the *Origin of language* that forms the crowning of the philological edifice.

6. *Name and Importance of the Study.*—It is the natural-history aspect of speech, above described, its physiology, as it were, and the classification of the different forms it assumes, that is the subject of the present manual. This study, as a distinct branch, is of recent growth, and has not yet settled down into a fixed name. It is variously spoken of as Comparative Grammar, Comparative Philology, Linguistic, the Science of Language. The last name seems the most appropriate, but has the disadvantage of being rather cumbersome.

Although investigations of the kind described may not promise any directly useful result, they are not without interest of an absorbing kind. Speech is at once the sign and the means of man's superiority over the rest of the animal kingdom; and he who can find no interest in learning the nature and workings of this precious faculty unless it promise to make him richer, can hardly be called a man. Besides its own inherent attractions, the comparative study of tongues is one of the chief instruments in another inquiry

of universal interest, that, namely, of the affinities of nations; Comparative Philology is the handmaid of Ethnology.

7. *History of the Science.*—The science of language, as already remarked, is of recent origin. It is not to be understood by this that it never occurred to anybody, until recently, to seek for affinities between the words of different tongues, and to speculate as to the nature and origin of language in general. On the contrary, inquiring minds have at all times been fond of exercising their ingenuity in this field. The exercise, however, was long little better than beating the air; it consisted mostly in blind gropings, wild guesses, and fanciful theories that died with their projectors. The cause of this fruitlessness lay in the reasoning being founded on too few facts. The ancient Greeks speculated largely on language; but, as a rule, they knew no tongue but their own, and considered all others barbarous jargons, and unworthy of study. The scholars of modern times for a long period confined their attention to Greek and Latin, including, it might be, Hebrew, with a contemptuous glance at their mother-tongue; hence their theories were nearly as baseless as those of the Greeks.

8. *Hebrew held to be the Primitive Language—Collection of Vocabularies.*—One great obstruction to the true course of inquiry was the assumption, first made by the Church Fathers, and for a long time unquestioned, that Hebrew was the primitive language of man, and that, therefore, all other languages must be derived from it. A prodigious amount of learning and labour was wasted, during the seventeenth and eighteenth centuries, in trying to trace this imaginary connection. Leibnitz was the first to set aside this notion, and to establish the principle, that the study of languages must be conducted in the same way as that of the exact sciences, by first collecting as many facts as possible, and then proceeding by inductive reasoning from these facts. It was owing to his appeals and exertions that missionaries, travellers, and others now began making those collections of vocabularies and specimens of languages and dialects which form the *Herbarium*, as it were, of human speech.

9. *Sanscrit and the Indo-European Family*.—The truths deduced from these collections were at first fragmentary, and without any fixed principles of classification. The light that brought order into the chaos rose with the study of Sanscrit, first made accessible to European scholars by Sir William Jones, Colebrooke, and other members of the Asiatic Society, founded in Calcutta in 1784. The similarity of Sanscrit to Greek and Latin, especially in the grammatical forms, struck every one with surprise. Sir William Jones declared that 'no philologer could examine the Sanscrit, Greek, and Latin without believing them to have sprung from the same source, which perhaps no longer exists. There is a similar reason, though not quite so forcible, for supposing that both the Gothic and the Celtic had the same origin with the Sanscrit. The old Persian may be added to the same family.' German scholars now took up the subject, and have since been the chief workers in this field. Frederick Schlegel has the merit of first (in 1808) boldly embracing the languages of India, Persia, and Europe in one family group by the comprehensive name of the Indo-Germanic languages. When first advanced, this could be considered only as a more or less probable assumption; but its truth has since been demonstrated by an accumulation of evidence, and it is now received as an established fact. Among the contributors to this demonstration, the chief place is due to the eminent scholar, Franz Bopp, professor in the university of Berlin. The first instalment of his labours appeared in 1816, and they culminated in his great work (published 1833-52) on the Comparative Grammar of the Sanscrit, Zend, Greek, Latin, Lithuanian, Old Slavonian, Gothic, and German. In this work it is shewn that the grammatical forms—the endings of the declensions and conjugations, &c., and the methods by which words are built up from other words, are fundamentally the same in all; these tongues, therefore, must all have sprung from a common source. This formed the foundation of the science of language, and the edifice has since been rising steadily under the hands of quite an army of workers. The method of investigation, thus invented and

perfected in the field of the Indo-European or Aryan tongues, as they are called (see page 37), has been applied to other languages, and considerable progress has been made in forming the principal varieties of human speech into groups, which, again, fall into subdivisions or branches, according to the different degrees of nearness in the relationship.

We will now proceed to give some account of the kind of facts and reasonings by which these results are arrived at.

THE VOICE.

10. *The Organs of Speech.*—A necessary preliminary to the study of speech itself is that of the organs that produce it. The sounds that compose speech are made out of emitted breath by means of mechanical modifications. As emitted breath proceeds from the lungs, that organ, together with the chest which compresses it, and the windpipe, may be considered as the fundamental organ of speech—the bellows. When the breath issues gently and without constraint, as in ordinary breathing, it is almost noiseless; by constricting the throat, and thus roughening the stream, we give it that kind of audibility known as a whisper. But in speaking aloud, the breath is chiefly *sonorous*. This quality it receives in the larynx, a kind of cartilaginous box between the windpipe, or trachea, and the throat. It is a complex structure; but the essential parts for our purpose are two membranous bands, called the *vocal chords*, running parallel from before, backwards, across the glottis or opening of the larynx into the throat. In a state of rest there is a considerable opening between the chords, and the air passes freely; but when we wish to speak or sing aloud, the chords become tightened, their edges approach, the stream of air makes them vibrate, and a sound is produced of the nature of a musical note or tone, on the same principle as in a *reed* instrument. The *pitch* of the sound depends mainly on the tension of the parts; and by varying this tension a series of musical notes is produced. But it is not this kind of modification that produces articulate

speech. For this purpose, the sounds produced in the larynx, whether of high or low pitch, must be further modified by the throat, the tongue, the teeth, the lips, the nose, which constitute, therefore, the remaining organs of speech.

Although loud speech is mostly made up of vocalised breath or tones, yet the indistinct sounds, or rather noises called breathings, of which whispering is made up, enter largely into its texture. By careful attention to the movements of the organs we are sensible of when producing the several sounds, and by means of the laryngoscope, an instrument which lays bare what takes place in the larynx, much has been done to render the mechanism of the elementary sounds of speech plain. We can only give the results in outline.

11. *Two kinds of Speech Sounds.*—When the mouth is sufficiently open to allow the breath to flow without obstruction or roughening, the air is moulded into the various qualities of *vowel*-sound. When the channel of the mouth is obstructed so as to stop the current of breath, or so narrowed at any part as to produce a rushing or hissing sound, *consonant*-sounds are produced.

12. *Vowels.*—The fundamental vowel may be considered as the open, Italian *a*, heard in *father*; it seems to issue full as it comes from the throat, without any special movement in the oral passage. This fundamental sound becomes modified into two divergent series, the one produced by the tongue, the other by the lips. By raising the convexity of the tongue a little towards the roof of the mouth, the breath column becomes flattened or thinned, and yields the vowel heard in *an*; still greater degrees of convexity yield the *e* of *ell*, and the *a* of *ale*; while the greatest degree possible, without actual contact or friction, yields the *ee* of *eel*. In all this the lips take no share; but in the other series they are the active modifiers, and the tongue is passive. When the aperture of the lips is gradually contracted, the open *ah* is converted successively into *aw*, the *o* of *ore*, the *o* of *no*, and the *oo* of *oose*. A third series of vowels is formed by combining elevated positions of the tongue and contracted

positions of the lips, or retracted positions of the tongue and expanded positions of the lips. Of this labio-lingual series, the German *z* is the most contracted, and the English sound heard in the word *err* the most open.

The following table shews the principal vowels of each class :

	Lingual.	Labio-lingual.	Labial.
Close.....	<i>ee(l)</i>	<i>ü</i>	<i>oo(æ)</i>
Medial.....	<i>ai(l)</i> <i>e(re)</i>	<i>eu</i> <i>ö</i>	<i>o(ld)</i> <i>o(re)</i>
Open.....	<i>ah</i>	<i>o(rr)</i>	<i>a(l)</i>

The possible modifications of the oral channel are endless, and untraceably minute, as are the shades of vowel-quality heard in dialects, and among individual speakers. In English, there are altogether *thirteen* established varieties, as heard in the words *eel*, *ill*, *ale*, *ell*, *an*, *ask*, *ah*, *err*, *up*, *all*, *ore*, *old*, *oose*. Besides these, which a perfect alphabet must represent, we have the diphthongal sounds heard in the words *isle*, *owl*, *oil*, and the aspirated compound *yoo*—the sound of the letter *u* in *use*.

13. *The Aspirate H*.—The letter *h* represents an expulsive breathing, modified by the form of the vocal element which follows it—as in *he*, *hay*, *high*, *hoe*, &c., in which the *h* will be observed to have the quality of *ē*, *ā*, *ī*, *ō*, &c.

14. *Consonants, Checks*.—The most characteristic of the consonants are those that altogether stop the emission of breath. When the tongue is raised convexly against the back of the palate so as to stop the breath, the separation of the parts is accompanied by a percussive effect, represented in the English alphabet by *c*, *k*, and *q*. When the stoppage is made by the fore-part of the tongue against the front of the palate, the effect of separation is the sound *t*. Similarly the separation of the closed lips gives rise to *p*. Intimately connected with *k*, *t*, *p*, are the series *g* (gun), *d*, *b*. The same contact that produces *p* produces *b*, but the latter is attended with a kind of muffled sound, which cannot, however, be prolonged. Similar is the relation of the other pairs *t-d*, *k-g*. The nature of the difference seems to be this : It is

ascertained that in pronouncing *k*, *t*, *p*, the vocal chords are wide apart ; but for *g*, *d*, *b*, they approach so as to moderate the rush of air, and also to be able to yield a tone during the brief time that air continues to escape from the larynx into the mouth, after the latter is closed. That there is such an escape, any one may satisfy himself by trying to prolong the sound of *b*, when he will find his mouth become distended. The difference between the two series is marked by contrasting them as *surd* and *sonant*, or better, perhaps, as *sharp* and *flat*.

The six consonants now described completely arrest the issue of breath from the mouth, and are therefore called *checks*. The term *mutes*, often applied to them, is hardly appropriate in the case of the flat series, seeing there is a momentary tone.

15. *Continuous Consonants*.—In all the other consonants the breath is not stopped, but only constrained or squeezed more or less, so that the sound can be prolonged. On this account, these consonants are called *continuous*. The distinction of flat and sharp pervades the continuous consonants as well as the percussive. In the sharps, the glottis is wide open, and the prolonged sound is that of a stream of breath roughened by narrowing of the passages in the mouth (*if*) ; in the flats, the continuous mouth-sounds are accompanied by a muffled sound from the narrowed glottis (*iv*). The chief continuous consonants are thus formed :

If, while the organs are in the several positions that produce the checks *g*, *d*, *b*, the vocalised breath is allowed to pass through the nose, the sounds *ng*, *n*, and *m*, respectively will be heard.

The elevation of the base of the tongue so as to leave a narrow aperture between its centre and the back-part of the palate, forms, with vocalised breath, the sound of initial *y* heard in *ye*. The same position, with voiceless breath, forms the German *ch* heard in *ich*, which is the same as *h* before *u* in English—for example, *hue*. The Scotch guttural in *loch* and the German *ach* differ from this only in the more retracted position of the tongue.

The elevation of the middle of the tongue towards the

front of the palatal arch, with a narrow central passage for the breath, produces the element which, for lack of an alphabetic character, is represented by the digraph *sh*; and the same position forms, with vocalised breath, the common element heard in *pleasure*, *seizure*, &c., but which has no appropriate literal symbol in English.

The approximation of the flattened point of the tongue to the front of the mouth, so as to leave a narrow central passage between the tongue and the upper gum, forms the sound represented by *s*; and by *z* when the breath is vocalised.

The elevation of the tip of the tongue towards the rim of the palatal arch causes a degree of vibration of the edge of the tongue, and consequent asperation of the breath, proportioned to the degree of elevation, which is the English sound of the letter *r*.

The approximation of the lower to the upper lip, so as to leave a central aperture for the breath, produces, with vocalised breath, the sound of *w* initial, as in *woo*. The sound of *w* resembles that of the vowel *oo*, but with a more contracted aperture. The same position, with voiceless breath, forms the element represented, for lack of an alphabetic character, by the digraph *wh*.

The remaining varieties of English articulate sounds are formed by forcing the breath through *lateral* apertures, instead of one central aperture.

When the fore-part of the tongue is spread against the front of the palate, and vocalised breath passes laterally over the middle of the tongue, the sound of *l* is heard.

When the tip of the tongue is applied to the upper teeth (or the gum), and the breath is emitted laterally over the point of the tongue, the sound of the digraph *th* as in *thin* is heard; and, with vocalised breath, the sound of *th* in *then*—neither of which is now represented in our alphabet.

When the middle of the lower lip is applied to the edge of the upper teeth, and the breath is emitted laterally between the teeth and the lip, the sound represented by *f* is produced; and, with vocalised breath, the sound of *v*.

16. *Liquids*.—The voice is so little intercepted in passing

through the nostrils in forming *m*, *n*, or *ng*, and through the wide apertures of *l*, and also of *r* when not initial in a syllable, that the sound has almost the pure sonorousness of a vowel; and these elements have received the name of Liquids, to designate their property of syllabically combining with voiceless consonants—seeming to flow into and to be absorbed by them, and losing much of their natural quality as vocal sounds.

17. *Function of Consonants, and their mutual Affinities.*—Consonants form, as it were, the bare and bony skeleton of speech; vowels give definite shape and individuality to words. Thus the consonants *sprt* constitute the common skeleton of such diverse words as *sport*—*spirt*, *sprat*—*sprite*, *spirit*, *support*, *separate*, *aspirate*—*asperate*. Consonants are thus the more stable elements of words, and their interchanges in the corresponding words of allied tongues are found to follow certain general laws dependent on their mutual relations and affinities. These relations are exhibited in the following table:

	SHUT.		OPEN.		NASAL.	
	Sharp.	Flat.	Sharp.	Flat.	Sharp.	Flat.
1. Labials.....	<i>p</i>	<i>b</i>	<i>f</i> <i>wk</i> <i>th</i> <i>s</i> <i>sh</i>	<i>v</i> <i>w</i> <i>dh</i> <i>z</i> <i>zh</i>		<i>m</i>
2. Linguals.....	<i>t</i>	<i>d</i>	<i>ll</i> (Welsh) <i>ch</i> (loch) <i>ch</i> (ich)	<i>r</i> <i>l</i> <i>gh</i> <i>y</i>		<i>n</i>
3. Gutturals.....	<i>k</i>	<i>g</i>				<i>ng</i>

In pronouncing the letters of the first class, the lips are chiefly concerned; in the second, the principal organ is the tongue, or the tongue and the teeth (whence they are also called *dentals*); and in the third, the back parts of the tongue and palate are employed. It naturally follows that, in the changes of form that words undergo, a labial, for example, will more readily take the place of another labial than of a guttural or a dental; as in *web* and *weave*, *wide* and Ger. *weit*, *hither* and Old Eng. *hider*, *sugar* and Fr. *sucre*.

18. *Phonetics.*—The branch of the science of language

which treats of the elementary sounds of speech is called Phonetics (from Greek *phōnē*, sound); and, along with the sounds themselves, it considers their representation by visible signs or letters. How imperfectly the elementary sounds of English are represented by the letters that compose the English alphabet, is apparent from the analysis above given. On this field, however, we do not enter. Our immediate subject is language as *spoken*, and not as represented by visible signs. But in writing about the elementary sounds, we must make use of the current alphabetical characters with all their imperfections; and it is necessary to warn the reader against the misconceptions that may thence arise.

HOW LANGUAGE CHANGES.

19. Language passes from generation to generation by tradition; the rising generation naturally learn to speak as the adult generation speak; and where there is any express teaching on the part of the old, it is to the effect of guarding the young against any deviation from existing use. But, notwithstanding this, language does change, has always changed, and will continue to change, like everything human. In proof of this, we have only to look back at English as it appears in any book written two or three hundred years ago. It already begins to have a strange aspect, and were it not that almost everybody still reads the Bible and Shakspeare, its strangeness would strike us still more. Chaucer, who wrote two centuries earlier than Shakspeare, can be understood by ordinary English readers only with pains and the help of a glossary. When we go back five centuries farther to King Alfred, the language of the royal author is as much foreign to us as Dutch. So much is this the case, that it has got a different name, and is spoken of as Anglo-Saxon. It is really, however, the same uninterrupted stream of English, only traced farther up towards its source.

20. *Introduction of New Words.*—Languages change in various ways. One change going on daily before our eyes

consists in the introduction of new words. As a rule, we have an instinctive and salutary hostility to new words. They, in fact, defeat the very end of speech ; to which it is essential that the meaning of the signs used be commonly known. But when we have a new thing or a new idea to speak about, we must either describe it in a roundabout way every time we mention it, or invent a special name for it. To do this is legitimate innovation. The progress of art and science has, within the last hundred years, enriched the English and other European tongues with many thousands of new technical terms. These terms have very various origins. Many of them are formed from Greek and Latin words, as 'palæontology,' 'megatherium,' 'electro-magnetism,' 'spectroscope,' 'protoplasm ;' others from proper names, as 'Galvanism,' 'Darwinism,' 'Faradisation,' 'Magenta ;' sometimes, in importing a new product or notion from a foreign country, its native name has been retained—for example, 'gutta-percha,' 'trepang,' 'tomahawk.'

In the more generally current part of the vocabulary, new coinages are naturally less frequent ; and when a new word does appear, it has to run the gantlet of criticism before admission. 'Reliable,' although not exactly a new word, has only recently come into frequent use, and its title to rank as a genuine English word is still disputed by some, although on insufficient grounds. The Americans are less fastidious in this respect than we are, and not a few words of Transatlantic manufacture are asserting a place in England, although looked askance at by purists—for example, 'to progress' as a verb from *pro'gress* ; 'to interview' from *interview*. Many words now in every-day use by learned and unlearned, were new in the days of Queen Elizabeth, and some of them were condemned by the critics of those times as inkhorn terms—for example, 'method,' 'numerous,' 'indignity,' 'audacious,' 'destruction,' 'prodigious.' 'International' seems as much at home as any word in the language, and yet it is only about half a century old, having been introduced by Bentham.

Sometimes new circumstances, or even an accident, will cause an obsolete word to be revived, or a provincial word

to be adopted into the general currency. A good instance of this is the word 'shunt.' It is merely a so-called corruption or secondary form of 'shun,' which primarily meant to shove, shove aside. 'Shunt,' says Wedgwood, 'having become obsolete in cultivated language, has been brought back again by accidental use in the terminology of railways.'

Languages often acquire additional words by a process of what may be called duplication. An accidental variety in the pronunciation or spelling of a word is fixed upon to express a particular modification of the meaning, and comes at last to be regarded as a separate word. Examples of this in English are 'custom' and 'costume;' 'courtesy' and 'curtsy;' 'corpse' and 'corps;' 'börn' and 'borne;' 'clod' and 'clot;' 'gentle,' 'gentile,' 'genteel.' The same process is seen in Latin 'providentia' and 'prudentia;' and in German 'golden' and 'gulden.'

21. *Decay and Death of Old Words.*—The counterpart of this birth of new words is the decay and death of old ones. Many words current in England in the days of Shakspeare are no longer heard, except, it may be, in provincial dialects: 'barn' (child), 'eyne' (eyes), 'wee' (small), 'caliver' (hand-gun), 'chare' (a turn of work), 'fardel' (burden), 'foison' (plenty), 'geck' (fool), 'stomach' (courage), 'welkin' (sky), 'yare' (ready).

It is unaccountable how so natural and appropriate a term for a child, as *barn*, derived from the verb to 'bear,' although once in use in all the Teutonic tongues, should have completely died out on the continent as early as the end of the 14th century, and should now survive only in the dialects of North Britain (Scot. *bairn*). Many short words have disappeared, from being superseded by longer derivative forms, which are frequently diminutives. This is well exemplified in the transition of Latin into French. Lat. *sol* has given place to *soleil*, from *soliculus*, a diminutive which, though not found in classical Latin literature, must have been in popular use. Similarly, Fr. *abeille*, a bee, is from the Lat. diminutive *apicula*, and not from the current name for a bee, *apis*, which has no representative in modern

French. The same process had been at work in the Latin language itself—and, indeed, in all languages—from the earliest times ; thus, Lat. *puella* (*puerula*), a girl, is clearly a diminutive of an assumed *puera*, the feminine of *puer* (primitively *puerus*), a boy.

22. *Transformation of Words*.—A more important change than the growth of new words and the death of old, is the transformation that words undergo while still continuing in use. This transformation is either in the meaning or in the form, or in both.

(A.) *Changes in Meaning*.—The Anglo-Saxon *sælig*, from which the modern English *silly* has been formed, means ‘blessed,’ ‘happy.’ But the best type of unalloyed happiness is that of a child, and as the happiness of a child is accompanied with innocence and simplicity, the word acquired the secondary meaning of ‘innocent, simple,’ and after a time altogether lost its primary meaning. Milton uses ‘silly’—into which form *sælig* had by degrees been transmuted—in the sense of ‘simple,’ without implying any disparagement. But simplicity borders on ignorance and feebleness of mind, and hence a second transition to the modern meaning of *silly*, in which nothing remains of the former stages. The same word, *selig*, while continuing to be used in German in the sense of ‘blessed,’ has acquired the secondary sense of ‘departed,’ ‘dead,’ ‘the late.’ ‘Beam’ had the same meaning in Anglo-Saxon times as now ; but that it originally meant simply ‘a tree’ is evident from such compounds as ‘beg-beam,’ the mulberry-tree, and the corresponding German word ‘baum.’ ‘Meat’ was, three hundred years ago, a general name for food of all kinds ; it is now limited to flesh. Change of meaning often takes this shape of turning a generic term into a special. The Greek ‘drachm’ originally meant a handful ; a ‘peck’ was simply a ‘pock ;’ and ‘inch’ and ‘ounce’ are both from the Latin ‘uncia,’ which meant the twelfth part of anything, as of a pound or a foot.

23. *Euphemism*.—When the meaning of ‘dead’ is superinduced on the German *selig*, ‘blessed,’ the association of ideas by which it comes about is transparent, and

the substitution of *selig* for a more obviously appropriate term is prompted by the desire to suggest a disagreeable idea in an indirect way. This instinct of politeness in speech—euphemism, as it is called—which seeks to hint at an unpleasant or an indelicate thing, rather than name it directly, has had much to do in making words acquire new meanings and lose old ones: thus, 'plain' has usurped the sense of 'ugly'; 'fast,' of 'dissipated'; 'gallantry,' of 'licentiousness.' To trace such transitions in the meaning of words is one of the most interesting and improving studies. It has been treated by numerous writers in regard to English; among others by Archbishop Trench in his instructive volume, *English, Past and Present*.

24. (B.) *Changes in Form*—(a.) *Change of Accent*.—One obvious change of this kind in English is the shifting of the accent a syllable forward. It is not long since everybody said *re'venue* and *balco'ny*; now everybody says *re'venue* and *ba'lcony*. It is held incorrect to accent *ally* on the first syllable; yet many do so, being guided by the analogy of the language, which seldom has the accent on the final syllable; and there can be little doubt that *a'lly* will in the end triumph over *ally*.

25. (b.) *Altered Pronunciation of Vowels*.—Since Anglo-Saxon times, and even since the days of Chaucer, the vowel sounds of English have been greatly altered. The investigations of Mr Ellis lead him to the conclusion that the vowel letters were pronounced by Chaucer's contemporaries pretty much as they continue to be pronounced in broad Scotch.

26. (c.) *Shortening of Words, or Phonetic Decay*.—But a more striking change is the dropping of sounds altogether out of words. This change is very much disguised by the conservative effect of writing, which tends to preserve the spelling of words, although the pronunciation has altered. Johnson's Dictionary did much to stereotype the spelling of the English language, although it has not been completely successful recently—for example, 'emperor,' 'arithmetick,' are now 'emperor,' 'arithmetic,' and 'honour' is on the inevit-

able road to 'honor.' The essential thing, however, is the spoken words, and they are constantly suffering curtailment whether the spelling alter or not. Thus, in *soften*, the *t* was originally pronounced, but it is now considered formal and old-fashioned to do so. Nearly all our silent letters, as they are called, were at one time heard, as in *psalm*, *wrought*. In words like *knee*, there was, in the primary forms, a vowel after the silent letter—*k(e)nee*—as we see in the corresponding Latin *genu*. This vowel vanishing, the *k* becomes difficult to pronounce, and is left silent in standard English, though still heard in Scotch and other dialects. *Mistress*, as a courtesy title, has dwindled into *Misses* for a married woman, with a kind of diminutive, *Miss*, for a young woman.

27. *Cause of Phonetic Decay*.—This curtailment of language has for its cause the natural tendency to economise exertion—laziness, in short. We instinctively seek to save our time and breath, and make as short work as possible with a word, provided it still conveys its meaning distinctly. Hence the vowel of an unaccented syllable becomes gradually shorter and more indistinct, until at last it is dropped altogether, and two syllables are pronounced as one, as in the instance just given of *knee*; *know* is a case of the same thing, as is seen from the old word *ken*, which is from the same root. But in this process the result is often not all gain in the way of ease; for the coalescence of syllables frequently causes combinations of consonants difficult of utterance. A great many of the existing clusters of consonants in the languages of civilised nations are distinctly traceable to this kind of coalescence (*debitum*, *debit*, *debt*), and it is believed that all of them originated in that way, and that the primitive form of all tongues was what we still see among barbarous peoples (for example, Kamehameha, the name of the late king of Hawaii), where every consonant is accompanied by a vowel.

Although it is generally by leaving out articulations that ease is sought, the same end is sometimes attained by inserting anomalous ones; thus, in borrowing the French *genre*, we have made it *gender*, because it is more easy for us, in passing from *n* to *er*, to take *d* by the way. In the

same way *b* is brought in as a bridge of transition in *slumber*, from Anglo-Saxon *slumerian*; in *humble*, from Latin *humilis*; in *dissemble*, from *similis*. The Greek word *ambrosia* would have been *amrosia*, if the Greeks could have tolerated *r* after *m*, for the word is from *a*, negative, and the root that we see in Latin *mors*, death, and means 'undying.' Consonants thus interpolated have been called 'excrecent' consonants, as seeming to grow out of the preceding consonant; they are sometimes found at the end of words, as forming an easier resting-point for the organs of speech—for example, 'thumb' (Ang.-Sax. *thuma*), 'tyrant' (Lat. *tyrann-*), 'sound' (Lat. *sonus*).

28. *Transition of Anglo-Saxon Words into modern English*.—This 'phonetic decay,' this wearing away and crumpling up of words for the sake of shortness, is strikingly seen in tracing the transition of Anglo-Saxon into modern English. Thus *dæg* becomes day; *fæger*, fair; *hlaford*, lord; *hlafdige*, lady; *wlf-man*, woman; *niht* (with the guttural *h* pronounced, as in Scotch), ni(gh)t; *wëorold*, world; *Eofor-wic*, York. One marked tendency or law may be observed in all this—namely, the tendency to drop or soften down the rough gutturals.

29. *Degradation of Latin in passing into French*.—The Latin tongue, in being transformed into French, has suffered severe degradation. *Pater* became *père*; *frater*, *frère*; *presbyter*, first *prestre*, and then *prêtre*; *magister*, *maistre*, *maître*. The termination *-atus* dwindled away to *é*—for example, *amatus* = *aimé*, *privatus* = *privé*. Before the inhabitants of Gaul began to learn the language of their conquerors, the Romans, they spoke Celtic. Now, such combinations as *sp*, *st*, are unknown in that language; and therefore, to make them pronounceable, the Gauls prefixed *e*, and turned *sperare* into *espérer*, *stabilire* into *établir* (English *establish*) and then into *établir*. This peculiar habit, together with the change of *-atus*, *-ata*, *-atum*, into *é* or *ée*, shews at once how *épée*, a sword, grew out of Latin *spatha* or *spata*, a blade of any kind (English *spade*).

30. *Decapitated Words*.—Many words have lost one or more initial letters, and been decapitated as it were. Lat.

notus (known), is for 'gnotus,' and that probably for 'gonotus ;' and were the spelling of English less fixed, 'know' and 'knew' would soon appear without the *k*. Lat. *latus* (borne) is for 'tlatus,' and that for 'tolatus,' from the *tol* of 'tollo' (to lift). Attention to this fact leads to many ingenious etymologies. It has been conjectured, for instance, that Lat. *lana* is for 'vellana,' as if from *vello* (to pull), (compare *vellus*, a fleece) ; this would bring it into relation with Eng. 'woollen,' Welsh 'flannel.'

31. *Decay a process of Life*.—It is manifest at a glance, even from the few examples given, that the curtailments that words undergo do not take place by chance or caprice, but in a more or less regular and uniform way. These uniformities in phonetic change and decay are among the most important of the laws of the life of language, which it is the business of philology to study. It may seem strange to speak of decay as life ; yet it is just as much a part of the life of language as waste of the tissues is in the life of the animal body. But the important part it plays will be best understood by considering it along with the counter-process—namely, the building up of new words from old material.

WORD-BUILDING.

32. *Compound Words*.—When we have to speak frequently about a thing that has no single name, as 'the top of the house,' 'a road provided with rails,' 'a ring for the ear,' 'a boat moved by steam,' we put the two words together without the connectives, and say 'house-top,' 'rail-road,' 'ear-ring,' 'steam-boat.' What constitutes a perfect compound in such a case is the sinking of the accent of one of the parts. We can bring together the two words *ocean steamer*, but they remain two words, each with its own accent ; the combination is not required sufficiently often to have formed them into a unity. The crow is a black' bird', but not a black'bird. When a compound has been long in use, the hyphen is dropped, and phonetic corruption sets in, if not in the spelling, in the pronunciation. In *forehead* and *shepherd*, it is only on consideration that we feel the two

parts of the word as distinct. The sailor, familiar only with *bōs'n*, never thought of a *boat* or a *swain* in connection with the officer so called, and would not know what was meant by *boat-swain* if he saw it, or heard it for the first time. In *nostril*, we readily recognise the first syllable, but for the second we must go back to Anglo-Saxon *nasthyrel*; and even then, it requires some etymological expertness to connect this with 'to drill,' 'to bore,' and to see that the full etymological meaning is 'nose-bore.' In *bōs'n* and *nostril* the fusion is felt to be complete, and two words have been welded into a single integral word; and, what it is of consequence to observe, this does not take place until we cease to perceive the meanings of the separate component parts, or at least of one of them. The necessary obscuration is brought about unintentionally, by slurring over the sounds; and thus the corruption of two old words results in the birth of a new one.

33. *Affixes and other formative Particles.*—The important part played by phonetic degradation and fusion is best seen in classes of words like 'god-ly,' 'friend-ly,' 'kingdom,' 'heathen-dom'; 'good-ness,' 'hard-ness'; 'plen-ty,' 'pover-ty'; 'bishop-ric'; 'hard-ship,' 'wor-ship'; 'plenteous,' 'graci-ous'; 'god-less,' 'aim-less.' The affixes or derivative terminations in such compounds were, there is little doubt, originally distinct words; it is demonstrable in the case of many of them, and may be confidently inferred in the case of all. That 'godly,' 'friendly,' are merely degraded forms of 'god-like,' 'friend-like,' is made certain by a reference to the Anglo-Saxon *god-lic*, *freond-lic*, and to the corresponding forms in other Teutonic tongues. We have shortened the Anglo-Saxon adverbial form *-lice* also into *-ly*, and now add it to all sorts of adjectives to form adverbs—for example, 'privately'; we can even say 'god-lily,' in which the word 'like' occurs twice. The affix *-dom* is doom, judgment, jurisdiction; *ric*, in Anglo-Saxon, means kingdom, rule, and is from the same root as *rex*; *-ship* is nothing else than 'shape,' condition, dignity; and 'god-less' is Ang.-Sax. 'god-leas,' in which *leas* is the adjective *leas*, loose, free from, without. The affix *-ty* belongs, appar-

ently, to an earlier stage than the other elements we have been considering; it is through the French (*pauvrete*), from Lat. *-tas*, *-tat(is)*, (*pauper-tas*, *-tatis*), in which, owing to the wear and tear of long ages, it is difficult to say what may have been the original form.

34. *Affixes forming Inflections.*—The earlier and primitive affixes seem to have been built up of monosyllables of the nature of demonstrative adverbs or pronouns, indicating primarily position in space—‘here,’ ‘there,’ ‘up,’ ‘down,’ ‘towards,’ ‘away from,’ &c. Two of these pronominal roots, *ma*, ‘here’ (pointing towards the speaker), and *sa*, or *ta*, ‘there,’ can be traced in all the Indo-European languages; they enter into the personal and other pronouns, and into the cases of nouns and the terminations of verbs. In the earliest form known, the three persons of the present singular of the verb ended in *mi*, *si*, *ti*. These are evidently connected with the personal pronouns, so that *dada-mi*, *dada-si*, *dada-ti*, are compound words, equivalent to ‘give-I, give-thou, give-he;’ or rather, ‘giving-of-me, giving-of-thee, giving-of-him.’ The plural terminations *mas*, *tas*, *nti*, contain the same elements with an indication of the plural number. The pronominal element *sa* entered into the nominative singular of masculine and feminine nouns, as in Lat. *equu-s*, Gr. *hippo-s*. A bare stem or root, with a general predicative meaning, was not considered a word without an addition to limit and fix it down. Thus *voc* in Latin has the sense of calling or sounding; *voc-sa* or *voc-s* (*vox*) is ‘that, or that which, sounds,’ ‘sound,’ ‘the voice.’ The plural *voc-es* is believed to be a corruption of *voc-sa-sa*, ‘sound that and that,’ the doubling of the pronoun expressing symbolically a plurality of the thing.

In many of the tense-endings it is possible to recognise auxiliary verbs. Thus Lat. *ama-vi* is for *ama-fui*, and *fui* is part of the verb *fu*, to be; so that *ama-vi* is literally, ‘love-was-I,’ or, ‘I was in the act of loving.’ The future tense in French is known to have been formed within historical times by affixing the present tense of the auxiliary *avoir*, ‘to have,’ to the infinitive of the verb—for example, *finir-ai* is, ‘to-finish-have-I,’ or, ‘I have to finish.’

35. *The English Affix d or ed; Reduplication.*—The formation of the English past tense in *d* or *ed* is a most instructive instance of this kind of composition. One of the earliest expedients for expressing past time seems to have been the repetition of the root; thus, from the root *dā*, 'give,' the Sanscrit formed *dadāu*, the Greek *dedōka*, and the Latin *dedi*, in which the reduplication of the word symbolises thorough, complete action, thereby implying that the action is over and past—'have given.' Similarly, the root *dha*, 'put' or 'make,' furnished Gr. *tetheika*, Old High-German *teta*, Ang.-Sax. *dide* or *did*. In nearly all simple Greek verbs, the perfect was formed by reduplication. Many of the oldest Latin verbs retained it, as *cado*, *cecidi*, to fall; *pello*, *pepuli*, to drive; and its previous existence may be inferred in *tūli* for *tetuli*, *feci* contracted for *fefici*. How readily the first syllable, being without the accent, would fall off is seen in its almost uniform absence in compound verbs—for example, *compello*, *compuli*. In modern Teutonic languages, the only remaining instance of the reduplicated past is *did* (Ger. *that*); but in Mæso-Gothic, the oldest form of Teutonic known, there were a considerable number of reduplicated past tenses—for example, *haldan*, to hold, perfect *haihald*; in Ang.-Sax. *heold*, for *hehold*; Goth. *haita*, to command, perfect *haihait*, in Ang.-Sax. *héht* for *hehet*, later Eng. *hight*; *letan*, to permit, *lailōt*. The reduplication, it is to be observed, is usually accompanied by a change of the root-vowel. This seems not to have been an essential part of the process, but, at most, only an accessory. The vowel-change was probably not intended to signify anything, but arose from the lengthening of the word. The addition of a syllable to a word has frequently this effect—for example, 'revise,' 'revision;' 'proclaim,' 'proclamation;' 'nation,' 'national.' But when the reduplication fell away, the altered radical vowel came to be looked upon as in itself the mark of past time. The vowel-changes, however, were irregular and seemingly capricious, so that no rule could be deduced from them for forming the past tense of a new verb. Besides, reduplication is only suited to simple verbs—root or stem verbs. Accordingly,

in the case of compound and derivative verbs, the expedient was adopted of affixing an auxiliary verb. In Latin, as already observed, a common form was *vi* or *ui* (*ama-vi*, *par-ui*), corrupted from *fui*, which is a contraction of the reduplicated past *fufui*, of *fu*, to be. In perfects like *scrip-si*, we may perhaps recognise the relics of an obsolete reduplicate perfect of *es*, to be. The Teutonic languages employed the reduplicated preterite of the verb 'do.' That the modern signs of past time in English (*d* or *ed*), and in German (*te*), are relics of Ang.-Sax. *dide*, and Old German *teta*, is rendered certain by the occurrence of such forms in Mæso-Gothic as *salbo-dēd-um*, *tami-dēd-um*, which are as explicit as 'anoint-did-we,' 'tame-did-we.' The preterites formed in this way soon came to outnumber the older reduplicated forms, and we now speak of them as 'regular,' and of the others as 'irregular.' Many verbs that in Old English formed the past tense by a change of vowel, now follow the prevailing fashion, and take *d*—as *leap*, which had at one time *læp* in the past tense, and has so still in some provincial dialects.

36. *Death of Formative Affixes*.—All cultivated languages shew a constant tendency to drop inflections, and to become circumscribed in their power of forming derivatives by means of affixes. English had at one time four different endings or cases for its nouns; it has now only one—the possessive (king's); and, according to the highest authorities, the use of the possessive case is becoming less and less extensive, and is destined to disappear and be supplanted by the preposition *of*, as completely as the Latin genitive (*regis*) has disappeared in French before the preposition *de* (*du roi*). The French and the other Romanic tongues retain the superfluous distinction of gender, which the English has happily got rid of. It has even been made a matter of speculation whether the plural ending might not be dispensed with. There are symptoms of a tendency in this direction in such expressions, now common among good speakers, as 'five pound,' 'six foot.' In German, the mark of the plural is regularly suppressed in such phrases as *zwei scheffel korn* (two bushel corn), *drei paar schuhe* (three pair shoes).

Of derivative affixes in English, some are still freely available for the production of new forms. Thus, new adjectives and adverbs are habitually formed by the addition of *ly*; *ness* is added to almost any adjective to form an abstract noun, without much regard to whether the adjective is of Teutonic or classical origin; and the adjective terminations, *ish*, *y*, *al*, are equally available. But no one ever thinks of making a new compound with *dom*, *ship*, *head*, or *ric*, or of coining an adjective on the model of 'silken,' 'earthen.' Nay, more, the words already formed with these and other suffixes are gradually dying out; 'wickedhed,' to be found in Chaucer, has given place to wickedness; of the once numerous class of words in *some* or *sum*, many have taken another termination ('love-sum,' now 'lovely,' 'mightsome,' now 'mighty'); others have perished, or survive only in dialects ('heavysome'; 'longsome' still lives in Scotch 'langsam'). The feminine termination in *ess*, derived from the French, is now confined to a few words like heiress; but in Wicliffe's Bible there occur 'spoussess,' 'sinneress,' and many similar forms; and even much later, 'saintess,' 'Jesuitess,' 'farmeress.' It would seem as if at one stage of the language adjectives like 'silken' could be coined at will, for multitudes of them occur in the older writers that are now never heard (for example, 'steelen,' 'tinnen,' 'broaden,' 'glassen'). In modern usage, the name of the material, without modification, is made to do duty as an adjective by simple juxtaposition (silk gown), and the few adjectives in *en* still in use are departing from their primitive force; 'silken' is rather 'looking like silk,' than 'made of silk.'

37. *Assimilation*.—When the composition of words brings incompatible letters together, one of the two is assimilated to the other. The same takes place when the falling-out of a vowel allows two incompatible articulations to come together. The operation of this law is conspicuously seen in words from Latin and Greek, compounded with prepositions and other prefixes; as *af*-firm for *ad*-firm, *ar*-rogate for *ad*-rogate, *il*-licit for *in*-licit, *sup*-port for *sub*-port, *sym*-metry for *syn*-metry. In these cases, the assimilation is

complete ; but the same end, namely, ease of pronunciation, is often attained by approximation merely, as *im-pute* for *in-pute*, in which the transition to the labial *p* is easier from the labial nasal *m*, than it would have been from the lingual nasal *n*. The case of prefixes, however, is of less importance in comparative philology than other parts of the process of word-building. Whenever we form a new compound, although we may retain the spelling, we instinctively accommodate the pronunciation of one part to that of the other. Thus, handkerchief is pronounced hang-kerchief. Here *d* is altogether dropped, and the lingual *n* is changed to the guttural *ng*, in order to make the transition to *k* more easy.

In the earlier and more fluent stages of language, this process of accommodation was more rapid and complete, being without the drag put upon it by writing and printing. Of complete assimilation of the preceding consonant to the following, we have examples in the Latin words *sum-mus* for *sup-mus*, *sel-la* for *sed-la* (*sed-*, to sit), *puel-la* for *puer-la*; in Greek, *gram-ma* for *graph-ma*. In *longis-simus* for *longis-timus*, *facil-limus* for *facil-timus*, the latter is assimilated to the former. Approximation is seen in *scrip-tus* for *scrib-tus*, *ac-tus* for *ag-tus* (*ag-*, to do or drive), *som-nus* for *sop-nus* (compare *soporific*), *Sam-nium* for *Sab-nium*. Instead of assimilation, one of the consonants is frequently dropped, in which case the vowel is usually lengthened by way of compensation. For example, the Latin for foot was originally *pēd-s*, which first, probably, became *pēss*, and was then written *pēs*; *lū-na* is for *luc-na* (*luc-*, to shine), *lu-men* for *luc-men*.

38. *Dissimilation*.—Sometimes ease of pronunciation is sought in dissimilation ; as in *eques-ter* for *equet-ter*, *claustrum* for *claud-trum*. A great many adjectives in Latin were formed by the affix *-alis*, as *mortalis*, *regalis*; but when the stem contained *l* in the last syllable, *-aris* was substituted :—for example, *popul-aris*, *vulg-aris*. In *cæruleus* for *cælu-leus* (compare *cælum*, heaven), it is the stem that is changed.

39. *Assimilation of Vowels*.—In some languages the

vowel of the affix is made to harmonise with that of the root, or *vice versa*; for example, the Turkish *ev*, 'house,' and *at*, 'horse,' have their plurals respectively *ev-ler* and *at-lar*.

40. *Idiosyncrasies of Tongues*.—In making these accommodations each language has peculiarities of its own. The Latins, for example, found such a combination as *genesis* (the original form of the genitive of *genus*) inconvenient, and changed the first *s* into *r*—*generis*; the Greeks threw it out altogether, and made *genesos* into *geneos*, and then into *genous*. The ancient Celtic inhabitants of Spain disliked initial *sp*, *st*, as their neighbours of Gaul did (see p. 25), and changed Latin *spata* into *espada*, *stabilis* into *estable*. Modern Italian tolerates *sp*, *st*, but not *fl*, *pl*, and turns Latin *flor* into *fiore*, *planus* into *piano*. French and Spanish retain these combinations, having *fleur*, *flor*, and *plain*, *piano*. Spanish has the peculiarity of turning Latin initial *f*, in many cases, into *h*, so that, for example, *facere*, *filius*, *fames*, *formosus*, appear disguised as *hacer*, *hijo*, *hambre*, *hermoso*.

These examples will suffice to shew how, what were originally the same words, may, in the mouths of people living apart, and with different idiosyncrasies, after a lapse of years, become so different as to form a new language. This leads us to the subject of

DIALECTS.

41. *Subdivision of Languages into Dialects*.—In speaking of a people having essentially all one language, but living extended over a wide territory, the name of *dialects* is given to those varieties or peculiar forms which that language assumes among the various tribes or other local divisions of the people. It is clear that the wider the separation comes to be between the several tribes, and the more they differ in mode of life and other circumstances, the more marked will the differences of dialect become. When, again, a particular tribe of this people increases in numbers, and also extends its territory, the same process is repeated, and its dialect

becomes broken into a number of sub-dialects. The principal check to this tendency to seemingly endless subdivision of language, is furnished by an increasing degree of common culture and civilisation. Where this is wanting, as in Africa and among the native populations of America, the subdivision is practically endless. So mobile and perishable is language in such circumstances, that the dictionaries and grammars prepared by missionaries have been found, after a lapse of two generations, to be useless.

42. *How a standard Dialect arises.*—A further check to divergence is usually found in one dialect of a country acquiring a dominance over the others. Various circumstances may give rise to this. The tribe that succeeds in establishing political supremacy is likely to make its dialect also prevail. A popular poet also may give his local dialect a general currency. Accidental circumstances have, in many cases, decided the rivalry. The Bible happened to be translated by a High-German, Luther, into his native dialect; other works on the then all-engrossing subject of religion followed in the same dialect; happily, too, the art of printing had just attained the perfection necessary to give these productions general circulation. It was this concurrence of circumstances that decided that High-German should in future be the spiritual bond among the wide-spread German people. For there were other dialects whose claims to the distinction were at that time equal, if not higher. So, in England, when the Norman Conquest destroyed the supremacy of the Wessex dialect—the standard of classic English since the time of Alfred—the Mercian and Northumbrian distinctions once more came to the front, and we find at least three dialects in use for literary purposes—Northern, Midland, and Southern. Gradually, however, one of these became prominent. The midland counties were the seats of the great universities and of the rich monasteries, and a succession of influential writers, culminating in Chaucer, chanced to belong to that region, and to use its dialect. It was also the speech of the metropolis; and thus, by a combination of circumstances, literary

and political, it became the mother of modern English ; though the northern dialect, once the foremost in the island, was beginning to produce anew, in the Lowlands of Scotland, a literature of equal merit, and for a time retained more distinctly traces of its ancient grammar.

43. *Dialects are not Corruptions.*—When a dialect has thus become the vehicle of written communication, and of the higher kinds of oral address, its character and position become changed ; and it stands henceforth in a sort of antagonism to the other dialects, and even to that out of which itself sprung. After a time these dialects become the exclusive possession of the uneducated classes, in which position they preserve many relics of old grammatical forms long after these have disappeared in the language of literature. Hence they come to be looked upon as provincial and vulgar. But it is to take an erroneous view of dialects, to treat them as corruptions of the standard language ; they had an independent origin, and they and the written standard continue to act and react on one another. The genius of a national language cannot be fully understood without taking into account its provincial varieties.

44. *Dialect a relative Term.*—It is obvious that dialect is entirely a relative term, and that what we call by that name in one connection, we may call a language in another connection. Thus, the most casual observer must be struck with the family likeness of Italian, French, and Spanish ; indeed we know as an historical fact, that all three were formed out of the same material—namely, the language of the ancient Romans. We might, therefore, speak of these languages as sister dialects, sprung from one common mother. But in ordinary usage, however nearly related the speech of two peoples may be, we do not apply the term dialects, unless the peoples are mutually intelligible, and have a common literary standard. Intelligibility, however, does not always decide the question ; for political relations enter more or less into the notion. Thus, Scotch is sometimes spoken of as a distinct language from English ; and yet in no part of Scotland is the common speech so unintelligible to an Englishman as is that of Somerset, which is

always a 'dialect.' This arises from Scotland being thought of as a separate country, which it once was, and its speech as the vehicle of a peculiar literature.

FAMILIES OF LANGUAGES.

45. The idea of groups or families of allied languages is thus an extension of the idea of dialects or varieties of one language ; the differences are perhaps more numerous and

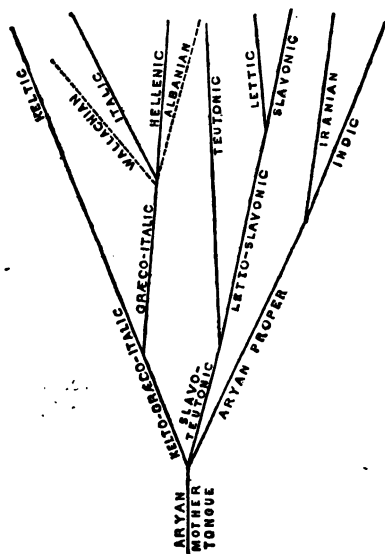


Fig. 1.—Outline Genealogical Tree of the Aryan Tongues.

From Farrar's *Families of Speech*.

profound in the one case than in the other, but they are of the same kind. The relation is the same in both cases—namely, that of sisters sprung from a common mother. The most important of the groups as yet established is that already named, the Indo-European, or Aryan. This

great family embraces seven stocks, each with its ramifications.

46. *Stocks of the Aryan Family.*—(a.) The ancient *Sanscrit*, with its modern descendants, the Hindu dialects spoken all over Northern Hindustan. In the oldest Sanscrit writings extant, the Vedas, the people who spoke that language called themselves 'Aryas,' meaning 'excellent,' 'honourable,' and hence the name of the whole family.

(b.) *Persian*, ancient and modern, along with Armenian, Kurdish, and Afghan.

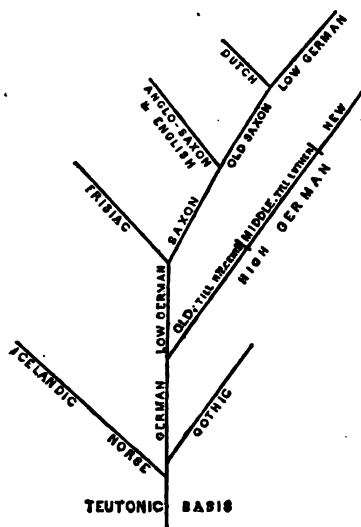


Fig. 2.—Ramifications of the Teutonic Stock.

From Farrar's *Families of Speech*.

(c.) *Greek*, ancient and modern. Notwithstanding the important part played by the Greek people in the intellectual history of mankind, their language now occupies but a small area, being mostly confined to Greece itself, and to the islands of the *Ægean*. Modern Greek is much less changed from classic Greek than Italian is from Latin.

(d.) *Latin*.—The modern representatives of Latin form a sub-family called the Romanic languages, consisting of Italian, French, Spanish, Portuguese, Rhæto-Romanic—spoken in several dialects in the valleys of the Rhætian Alps—and Walachian.

(e.) The *Teutonic* stock, divided into two branches, the Germanic and the Scandinavian. The Germanic branch embraces the various dialects, High and Low, spoken in Germany proper, together with the Dutch or Netherlandish of Holland and Belgium, and English, the last two being varieties of Low-German. The Scandinavian branch occupies Denmark, Sweden, Norway, and Iceland.

(f.) The *Slavic* or *Slavonic* stock, covering Russia, Poland, portions of Austria, and the north of Turkey. The chief languages are Russian, Polish, Bohemian, Servian, Bulgarian.

(g.) *Celtic*.—At the dawn of history, tongues of this stock were spoken over a great part of Europe—Gaul or France, the British Islands, part of the Spanish peninsula, many parts of South Germany, and the north of Italy; and to judge from the names of mountains, rivers, &c., the Celtic area must at one time have been still more extensive. It is now confined to Ireland, the Scottish Highlands, Wales, the Isle of Man, and some parts of Brittany. The remnants of the Celtic tongues present two types, forming two branches. The Irish, the Gaelic of Scotland, and the Manx, belong to the northern or Gadhelic branch (Gaelic is merely a short form of Gadhelic); the southern or Cymric branch is represented by the Welsh, Cornish of Cornwall (extinct since 1778), and the Breton of Brittany.

47. *Marks of Affinity in Languages*.—The evidence on which all these tongues are believed to be sprung from one original tongue, consists in their having a great many words in common, and in their grammatical forms being the same. This latter kind of evidence, although less striking at first sight, is considered by philologists a surer test of affinity than the former. For when those elements of a language which express the relations of things—case, number, tense—have once become mere terminations, and

lost their original form and independent meaning, they can only be transmitted by tradition; and when the same grammatical forms are found possessed in common by two or more tongues, they must be an inheritance from a common ancestor. It is difficult, without entering into minute details, to exhibit in a satisfactory way the evidence of the identity of the inflectional endings in the Aryan tongues. The most striking instance is the *s* of the genitive singular, which was once common to them all, and persists to this day in several of the family (for example, Ger. *vaters*, Eng. father's). The *m* of *am* is the sole relic in English of an element once universal in the first person singular of the verb (Sansc. *asmi*, Gr. *eimi*, Lat. *sum*).

It is more easy to make the radical sameness of the individual words apparent. In judging of this sameness, we are no longer guided by mere similarity of sound: on the contrary, identity of sound is generally a presumption that a proposed etymology is wrong. Words, as we have seen, are constantly undergoing change, and each language follows its own fashion in making those changes. Corresponding words, therefore, in allied tongues must, as a rule, differ, and the differences follow certain laws which it is possible to ascertain; and unless a proposed identification accord with those laws, it is inadmissible. We are not at liberty to suppose any arbitrary omission of a letter, or substitution of one letter for another, as was the fashion in the old guessing school of etymology. Thus, it would be inadmissible to assume Old Irish *athir* to be identical with Latin *pater*, unless it be proved to be the habit of the Irish to drop the initial *p* of the original word; but this is seen to be the case by such additional instances as *iasg*, Old Irish *isc* = Lat. *pisc(is)*, a fish; *lan* = Lat. *plen(us)* full.

GRIMM'S LAW.

48. Of the laws of interchange of sounds in the Indo-European family, the most important is that known as Grimm's Law, so called after the famous German philologist who investigated it. It is of extensive application,

affecting the whole consonantal structure of the Aryan tongues, and in its whole extent is rather intricate. The following table exhibits the more important interchanges between the ancient classic languages and the Germanic :

	Labials.		Dentals.		Gutturals.	
Greek (Latin, Sanscrit)....	p	b f	t d	th	k	g ch
Gothic (English).....	f	p b	th	t d	k	g
Old High-German.....	b (v)	f p	d	z t	g	ch k

The meaning of the table is, that for *ϕ* in a Greek (Latin or Sanscrit) word, the cognate word in Gothic (or English) will be found to have *f*, and in Old High-German *b* or *v*; and so with the other columns.

Examples.

Sans. pad-as, Gr. pod-os, Lat. ped-is, Goth. fot-us, Eng. foot, O. H. Ger. vuoz, Ger. fuss.

Sans. pitri, Gr. and Lat. pater, Goth. fadrs, Eng. father, O. H. Ger. vatar.

Sans. bharami, Gr. phero, Lat. fero, Goth. baira, Eng. bear.

Sans. bhrag, Gr. phlego, Lat. flagro, Goth. bairht, Eng. bright, O. H. Ger. percht, Ger. pracht.

Sans. tola, Gr. talan, Lat. tolerare, Goth. thulan, Scot. thole, Ger. dulden.

Sans. damja, Gr. daman, Lat. domare, Goth. tamjan, Eng. tame, Ger. zählen.

Sans. uda, Gr. hydor, Lat. u(n)da, Goth. vato, Eng. water, Ger. wasser.

Sans. hrid (krid), Gr. kardia, Lat. cord-is, Goth. hearto, Eng. heart, Ger. herz.

Sans. ganaka, Gr. gennetor, Lat. genitor, Goth. kyning, Eng. king, O. H. Ger. chuninc, Ger. könig. 'King' thus meant originally 'father.'

Sans. gani (mother), Gr. gyne (woman), Lat. gene-trix, Goth. qino or qens, A.S. cuen, Eng. queen.

Sans. hansa, Gr. chen, Lat. (h)anser, A.S. gos, Eng. goose, Ger. gans.

There are, of course, many exceptions to the law, arising from the influence of adjoining letters and other incidental causes. It holds good oftenest at the beginning of words.

49. *Interchanges of Letters between English and High-German.*—It will be observed that the English differs more from the High-German than it does from the Gothic, which belongs, like English itself, to the 'low' Teutonic group. By observing the relations between the German and the English exhibited in the following table, the beginner in German may easily recognise the English equivalent of many German words.

Ger. <i>d</i> = Eng. <i>th</i> .	Ger. <i>s</i> = Eng. <i>t</i> .	Ger. <i>th</i> or <i>t</i> = Eng. <i>d</i> .
dies = this.	zahlen = tell.	thau = dew.
das = that.	zehe = toe.	theuer = dear.
denn = then.	zinn = tin.	theil = deal.
denken = think.	zoll = toll.	tanz = dance.
dick = thick.	zu = to.	tag = day.
dein = thine.	zwei = two.	taube = dove.

50. *Causes of Dialects.*—It is difficult to account for such dialectic diversifications, as the greater part of them cannot be ascribed to the tendency to seek ease of utterance. Max Müller thinks it necessary to go back to a time when many of the articulations were not yet sharply defined; and he appeals, in illustration, to the confusion children make between such sounds as *tat* and *cat*; and, what is still more in point, to the analogy presented by languages like the Polynesian. In the language of the Sandwich Islands, the two consonants, *k* and *t*, run into one another, 'and it seems impossible for a foreigner to say whether what he hears is a guttural or a dental. The same word is written by Protestant missionaries with *k*, by French with *t*. It takes months of patient labour to teach a Hawaiian youth the difference between *k* and *t*, *g* and *d*, *l* and *r*. . . . If colonies started to-morrow from the Hawaiian Islands, the same which took place thousands of years ago, when the Hindus, the Greeks, and Romans left their common home, would take place again. One colony would elaborate the indistinct, half-guttural, half-dental contact into a pure guttural; another, into a pure dental; a third, into a labial.' Much light is thrown on this question by those phonetic peculiarities—those deficiencies and predilections of articulation which characterise whole tribes and nations.

51. *Individual peculiarities a source of Tribal Dialects.*—

This tendency to divergence is often to be observed in the young of the same family, although all learning to speak from the same models. One finds difficulty with an articulation which to the others was easy; or habitually substitutes one articulation for another; and traces of this are often carried into adult life. Here we have, according to the theory of Darwin, the germs of a new variety of speech. In a large and civilised community these incipient divergences are checked by the necessity of conforming to the general standard. But in the nomadic state, in which each small community lives in a state of isolation, we have only to suppose an individual with some peculiarity of pronunciation to leave the family tent, and become the founder of a new tribe, and we have the possibility of a new dialect. A lisping patriarch might produce a tribe of lispers, without their inheriting the physical defect that caused the lisp in him.

52. Another cause of divergence may be found in external circumstances of climate and mode of life, which are sufficient to induce a peculiar habit of the organs of speech in a whole community, just as they affect the external features of the face. But, however they may have originated, these peculiarities, when once established, are very persistent and influential. The Mohawks, and several other American tribes, have no *p*, *b*, *m*, *f*, *v*, or *w*; they never articulate with their lips. In Chinese, there is no *d*; *r* is also wanting; and as the habit of the language requires a vowel after every consonant, the nearest approach a Chinaman can make to the sound of *Christ* is *Ki-li-se-tu*. An analogous habit of articulation transforms the English word *gold* in the mouth of a Kafir into *i-go-li-de*.*

* These predilections and idiosyncrasies of articulation are strikingly exhibited in a New Zealand newspaper printed in parallel columns of English and Maori. The Maori version exhibits European proper names and words borrowed from English, transliterated as the natives pronounce them. The Maoris seem incapable of articulating *d*, *b*, *f*, *v*, *l*, or *s*, or of pronouncing any consonant without a vowel after it; so that in their mouths Donald Fraser becomes Tonore Pereiha; Stephen = Tepene; Martha = Maata; Locke = Raka; Jerusalem = Hira-harama; October = Oketopa; September = Hepetama; school = kura; horses = hoiho; bay = pei; courts = cooti.

53. *Words identified under disguise.*—By observing the laws which we have above illustrated as regulating the interchange of sounds among the Indo-European languages, we can often identify words where there is little or no internal resemblance. Take Eng. *feather*. If there is a corresponding word in Greek or Latin, the root-consonants must, by Grimm's law, be *p-t*; which leads us to the root *pet*, signifying in both languages, to fly. From this the Greeks formed *pet-eron* (contracted into *pteron*), a wing, which there is no difficulty in admitting to be the same word as *feather*. It is hard to believe the same of the Lat. *penna*, until we learn that it once had the forms *pet-na* and *pes-na*, *penna* being the result of assimilation. Again, we undertake to identify French *larme* with Eng. *tear*. No one will dispute that *larme* is a corruption of Lat. *lacrima*; in fact, it can be followed in the history of the French language through the successive stages of change. Now, we know that the Romans had a peculiarity of letting *d* in some positions degenerate into *l*. Nor is this unaccountable, when we consider that the contact of organs which produces *d*, differs from that which produces *l* chiefly in being more energetic; a slovenly *d* slides into *l*. Thus, the Greek name, Odysseus, became, in the mouth of the Romans, Ulysses; they said *odor* (a smell), but *oleo* (I smell); and instead of *impedimentum*, *dedicare*, we sometimes find *impelimentum*, *delicare*. These and other instances would warrant us to conclude that *lacrima* was a corruption of *dacri-ma* (corresponding to Gr. *dakru*), even if we had not the express statement of Festus that *dacrima* was the older form. After this, there is no difficulty in recognising *dacri* or *dakru* as identical with Gothic *tagr*, Eng. *tear*.

54. *Numerals and Family Relations.*—The words which are most palpably and unmistakably the same throughout the Indo-European tongues are the numerals, the pronouns, and those expressive of family relations. The following table, taken from Professor Whitney's excellent volume on *Language and the Study of Language*, exhibits in a clear way some of these correspondences. Under each word is added its equivalent in two other languages, Arabic and

Turkish, which, though existing in proximity to the Aryan languages, will be seen to have no affinity with them or with one another.

English.....	two.	three.	seven.	thou.
Teutonic :				
Dutch.....	twée.	drie.	zeven.
Icelandic.....	tvö.	thriú.	síð.	thu.
High-German.....	zwei.	drei.	sieben.	du.
Mæso-Gothic.....	twa.	thri.	sibun.	thu.
Lithuanic.....	du.	tri.	septyni.	tu.
Slavonic.....	dwa.	tri.	sedmi.	tŭ.
Celtic.....	dau.	tri.	secht.	tu.
Latin.....	duo.	tres.	septem.	tu.
Greek.....	dŭo.	treis.	hepta.	sŭ.
Persian.....	dwa.	thri.	hapta.	tum.
Sanscrit.....	dwa.	tri.	sapta.	twam.
Arabic.....	ithn.	thalath.	sab.	anta.
Turkish.....	iki.	ŭch.	yedi.	sen.

English.....	me.	mother.	brother.	daughter.
Teutonic :				
Dutch.....	mij.	moeder.	broeder.	dochter.
Icelandic.....	mik.	modhir.	broðhir.	dottir.
High-German.....	mich.	mutter.	bruder.	tochter.
Mæso-Gothic.....	mik.	brothar.	dauhtar.
Lithuanic.....	manen.	moter.	brolis.	dukter.
Slavonic.....	man.	mater.	brat.	dochy.
Celtic.....	me.	mathair.	brathair.	dear (?)
Latin.....	me.	mater.	frater.
Greek.....	me.	meter.	phrater.	thugater.
Persian.....	me.	matar.
Sanscrit.....	me.	matar.	bhratar.	duhitar.
Arabic.....	ana.	umm.	akh.	bint.
Turkish.....	ben.	ana.	kardash.	kiz.

55. *The parent tongue and nation of the Aryan Family.*—Such are a few specimens of the mass of evidence which goes to prove that the Indo-European languages are only later dialectic varieties of a single original tongue. No one of these languages—not even the Sanscrit, old as we know it to have been—can claim to be the parent of the others. The relation among them is that of sisters, daughters of one mother, which perished, as it were, in giving them birth. If we ask where the tribe or nation lived that spoke this parent tongue, we get little beyond conjectures for answer. Most of the speculations on this topic point to Central Asia,

somewhere east of the Caspian, and north of the Hindu Kush. And, from the legendary traditions of the sacred books of the ancient Persians, there seem good grounds for believing that in that region—the ancient Bactria—the Indo-Persian branch of the family once lived together; that they there quarrelled, owing to religious differences, and that one section made their way across the Indus, to become the Sanscrit-speaking Hindus, while the other moved southwards, and settled in Persia.* But that the Indo-Persians had always lived in that northern region, or that the western members of the family migrated from thence, there is no direct evidence. One distinguished ethnologist, Dr Latham, believes the seat of the mother Aryan nation to have been Central Europe; but the probability seems to be in favour of the East.

The time of these migrations is equally unknown with the point of departure; they had taken place ages before the dawn of history.

56. *Civilisation of the Primitive Aryans.*—But although left in darkness as to the when and where of the primitive Aryans, we are able, strange as it may seem, to speak with some confidence as to their state of civilisation. Where the same name for an object or notion is found used by the widely spread members of the family, it is justly inferred that that object or notion must have been familiar to them while yet resident together in the paternal home. It is in this way established, that among the primitive Aryans not only were the natural and primary family relations of father, mother, son, daughter, hallowed, but even the more conventional affinities of father-in-law, mother-in-law, sister-in-law; that to the organised family life there was superadded a state organisation with rulers or kings; that the ox and

* The region that forms the water-shed between the basin of the Sea of Aral and the streams that run eastward and southward has been only recently explored. It is not so much a mountain chain as a vast table-land of great elevation fringed with towering sierras, and is called the Pamir Steppe or Plateau. In the upper valleys that slope down from this great mountain mass are found isolated tribes strikingly different from the Tartar races all around them, and shewing what are believed to be affinities, both in physique and language, with the Aryan races.

the cow constituted the chief riches and means of subsistence; and that houses and towns were built. In this mainly pastoral life, the more important of the primitive arts were known and exercised; fields were tilled; grain was raised and ground into meal; food was cooked and baked; cloth was woven and sewed into garments; and the use of the metals, even of iron, was known. The numbers as far as a hundred had been named, the decimal principle being followed. The name for a thousand had not come into requisition until after the dispersion, for it differs in the different Aryan tongues.

THE SEMITIC FAMILY.

57. The only other group of tongues among which a family relation has yet been satisfactorily made out, is the Semitic or Shemitic, so called from Shem, the son of Noah, who is represented in Genesis as the ancestor of the chief tribes that spoke those tongues. The Semitic tongues are divided into three classes: 1. The northern or Aramaic, spoken at one time over the region lying to the north of Palestine and Arabia as far as the Taurus range in Asia Minor, and extending in longitude from the Mediterranean to the Tigris. Eastern Aramaic, comprising the dialects of Assyria and Babylon, is sometimes called Chaldee; the western is known as Syriac. Aramaic was the common language of Palestine in the time of Christ, the Hebrew being then the sacred language. 2. The southern class, comprising Arabic, and the Amharic of Abyssinia, which has superseded the older allied Ethiopic. 3. The middle class, consisting of Hebrew, and the dialects spoken by the other inhabitants of Palestine, the chief of which was the Phœnician. This Semitic dialect had at one time an extensive area by means of the settlements of the Phœnicians at Carthage, and other places on the islands and coasts of the Mediterranean. With the exception of some remnants of Syriac, spoken by a few scattered Christian communities in Asia, and the Amharic of Abyssinia, Arabic is the only living representative of the Semitic tongues. From Arabia

proper it has spread into Egypt and the whole of North Africa, and the vocabularies of modern Persian and Turkish are largely composed of Arabic words.

58. *No Relation between the Semitic and Aryan Tongues.*

—The inflection of the Semitic tongues is of a type quite distinct from that of the Aryan family, nor can any correspondences be found between the words of the two families beyond chance resemblances in sound. The cases of similarity that have been adduced are those of words directly borrowed from the Semitic, as camel from *gamal*, sapphire from *sappir*; or of mimetic words, formed in imitation of the sound of the action, as *charat* = grate, *parak* = break. The attempt, on which so much learned labour was once bestowed, to trace Latin, Greek, and other words to a Hebrew origin, is now acknowledged by all competent philologists to be futile.

TYPES OF LANGUAGE.

59. *Monosyllabic or Isolating Languages.*—Besides the division of languages into families bearing traces of a common origin—the genealogical classification—there is a division into three orders, as they may be called, depending upon a radical difference of structure. Speech, as the expression of thought, contains two elements: ideas or conceptions, which constitute the substance or material part; and the relations of these ideas to one another, which constitute the formal part; and the nature of a language depends upon the particular way in which the vocal expression of these two elements is combined. At the foundation of all words lie roots, or simple sounds expressive of meaning. Now, some languages, as the Chinese, use these roots in their naked form as words, the same syllable, according to its position, serving as noun, adjective, verb, &c.—for example, *ta* means 'great,' 'greatness,' 'to be or to make great,' 'greatly,' or 'very.' The relational part of the thought, for the most part, gets no vocal expression; it is only indicated by position, as when *min*, people, and *li*, power, are simply put together (*min li*) to signify the people's power. Relations

not readily indicated by position are expressed in a round-about way, by using additional significant words: thus, *tschung* (mass or multitude) *jin* (man) = men; *niu* (woman) *tsè* (child) = daughter; *ſ min li* (employ people power) = with the people's power. Even in such cases, each root preserves its independence, and is felt to express its own radical meaning. Languages like the Chinese, whose development has been arrested at this rudimentary stage, are called *Monosyllabic* or *Isolating*.

60. *Agglutinate Languages*.—The next stage of development is that of the *Agglutinate* languages, which are by far the most numerous, including the Turanian and American groups. In these the relational part of thought obtains prominent vocal expression by separate roots, joined or *glued* on to the significant roots as terminations. These terminations were originally themselves significant roots, and many of them are still used as separate significant words, although the greater part have sunk down to mere signs of cases and other relations. The compound expression thus formed never, however, attains perfect unity; the significant root always remains rigid, unobscured in its sense, and unchanged in form, and the termination is felt as something distinct from the body of the word.

61. *Finnish and Turkish Inflections*.—Thus, the Finnish declension exhibits a structure of the most mechanical and transparent kind—for example, *karhu*, bear; *karhu-n*, of the bear; *karhut-ta*, without bear; *karhu-sta*, out of the bear; and so on through fifteen cases. The insertion of the plural suffix, *i*, gives *karhu-i-n*, of the bears; *karhu-i-ta*, without bears; *karhu-i-sta*, out of the bears; &c. But this composite mechanical structure reaches its climax—remaining all the while perfectly transparent—in the Turkish verb. Thus, the root *sev* has the indefinite meaning of loving, and the inf. is *sev-mek*, to love; which then, by the insertion of certain suffixes, can take on as many as forty forms or voices—for example, *sev-me-mek*, not to love; *sev-e-me-mek*, not to be able to love; *sev-dir-mek*, to cause to love; *sev-dir-ish-mek*, to cause one another to love; *sev-il-mek*, to be loved; *sev-il-e-me-mek*, not to be able to be loved, &c.

Each of these forms, then, runs through a large round of tenses and moods, with their persons and numbers.

62. *Incorporative or Intercalative Languages*.—The languages of the American Indians are all of this agglutinating type, although they have also got the name Incorporative, or Intercalative, because they run a whole phrase or sentence into one word—for example, *hoponi*, to wash; *hopocuni*, to wash hands; *hopoaduni*, to wash feet; *ninacagua*, I (*ni*) eat (*qua*) flesh (*naca*). The Basque language partakes of this character. In building these compounds, it mostly happens that only fragments of the single words are used. Thus, in Mexican, *atl*, 'water;' *chichiltic*, 'red;' *tlacatl*, 'man;' and *chorea*, 'weep,' are clipped, and fused into *achichillachocan*, which means, 'the place where people weep because the water is red.' Similarly, the Basque language makes *ilhun*, 'twilight,' out of *hill*, 'dead,' and *egun*, 'day;' and *belhaun*, 'the knee,' from *belhar*, 'front,' and *oin*, 'leg.'*

63. *Inflectional Languages*.—It is only in the third or *Inflectional* stage that perfect unity of the two elements is attained. In the Aryan and Semitic tongues, which alone have reached this highest state of development, the significant root and the termination have become blended into one both in effect and form, and phonetic changes have for the most part obliterated the traces of composition. Yet no doubt is felt by philologists that the most highly organised of the inflecting or amalgamating languages began with the radical stage, and passed through the agglutinate. The analytic powers of comparative grammar have succeeded in tracing back the formative elements of the Aryan tongues to original independent words, agglutinated to other words to modify them. Of this we have given numerous examples when speaking of word-building. Against this theory it has been urged, that there is no historical instance of a language so changing its type, and passing from one stage to another. But a sufficient account of this phenomenon may be found in the different mental habits

* This style of word-building is coming into use in the nomenclature of modern chemistry—for example, *aldehyd* = *alcohol dehydrated*.

and political positions of the peoples (see Max Müller, *Lectures on the Science of Language*, First Series, page 316). Besides, the languages of the lower types do shew a tendency, under favourable circumstances, to produce grammatical forms of the higher kind. Even in Chinese, in some of its modern dialects, something like cases is to be seen; and Finnish and Turkish, in contact with the inflected languages of Europe, are making approaches to the inflectional type.

64. *The distinction between Inflectional and Agglutinate Languages not absolute.*—In contrasting one language as inflectional with another as agglutinate, it is not to be understood as if the difference were distinctly recognisable in every word. It is more a distinction of degree than of kind. Indeed, if inflection is a development of agglutination, it must retain traces more or less of its earlier condition. And this is the fact. In such English words, for example, as 'hard-ness,' 'hurt-ful,' 'trust-ing,' the distinctness of the root from the affix seems as complete as in Turkish. All that is meant is, that certain languages are characterised by the *predominance* of one of the types of structure, and others by the predominance of the other; that in what are called agglutinate languages the compounds have, on the whole, the character of mosaics in which the joinings of the pieces remain visible, while in the inflectional class the parts are, as a rule, more fused and blended into an indistinguishable unity.

65. *Synthetic and Analytic Stages.*—As contrasted with the monosyllabic, isolating languages, those of the agglutinate and inflective types are called *synthetic* and *polysyllabic*. In the inflectional languages, the full development of polysyllabism must have taken place in the prehistoric ages. Before the earliest times of which we have any written monuments, they seem to have entered on the reverse phase—the *analytic*. By the process of phonetic change and decay, the grammatical forms have been gradually losing their power and becoming obliterated, their place being supplied by separate words in the shape of prepositions and auxiliary verbs. This tendency is manifested in very different degrees

in different languages ; it is most marked in the Teutonic stock of the Aryan family, and above all in English. There has, however, been no abrupt, absolute arrest of the synthetic process ; the Teutonic tongues, as we have seen, developed a new form of past tense at a comparatively late period of their history ; the Romanic tongues have produced a new future tense (Fr. *finir-ai*, to finish-have-I) within historic times. Italian uses habitually such polysyllabic combinations as *darmelo*, 'to give it to me ;' *dandomelo*, 'in giving it to me ;' and, according to Professor Whitney, 'the Russian of the present day possesses in some respects a capacity of synthetic development hardly, if at all, excelled by that of any ancient tongue.' For example, it takes the two independent words, *bez Boga*, 'without God,' and fuses them into a theme, from which it draws a whole list of derivatives—*bezbozhnüt*, 'godless ;' *bezbozhnik*, 'an atheist ;' *bezbozhnichat*, 'to be an atheist ;' *bezbozhnichestvo*, the condition of 'being an atheist ;' *bezbozhnichestvovat*, 'to be in the condition of being a godless person.' Still it is true that the more cultivated of the inflectional tongues are gradually denuding themselves of their grammatical affixes, and becoming cramped in the power of forming new synthetic derivatives.

66. *Is a Language impaired by losing its Inflections ?*—The analytic tendency of modern tongues is regretted by many, as impoverishing and weakening their powers of expression. Copious grammatical forms are held to confer a peculiar grace, flexibility, and melody, and a power of conveying nice and subtle shades of meaning, of which the barer modern tongues are destitute. Now, thus much may be granted, that words clothed in all their circumstances are more life-like, and better suited for the picturesque effects of poetry than is the grammatical simplicity of the modern tongues ; yet it is claimed, on the other hand, that this simplicity is not only better suited to the business of life, but more favourable to clearness and precision in narrative and in reasoning. 'Unnecessary and superfluous forms are no real wealth. They are often an embarrassment rather than a help.'—*Trench*. The Aryan and Semitic languages

had all originally a dual number, both in nouns and verbs; but it began at an early period to be cast off as an encumbrance. Anglo-Saxon retained a relic of it in *git*, 'ye two;' *wit*, 'we two,' alongside of the indefinite plurals, *ge* and *we*. In no Romanic or Teutonic tongue of to-day is there a trace of it; even modern Greek, which has preserved so much of its ancient grammatical apparatus, has dispensed with this superfluous 'distinction of moreness into twoness and muchness.' The English-speaking peoples are the envy of the nations, as having shaken off the trammels of grammatical gender. There seems no reason why we should not get rid of the last relic of it that still adheres to the personal pronouns. We do not feel the want of it in the plural (*they*); why *he*, *she*, *it*? Modern Persian, it is said, is in this point in advance of the English.

67. *Grammatical Distinctions in Excess.*—The increasing attention recently given to the languages of the lower races has helped to correct many long prevalent misconceptions and prejudices derived from the almost exclusive study of the classic tongues. If the faculty of making a number of distinctions by means of synthetic compounds is a proof of excellence in a language, then the agglutinate languages are superior to the inflectional; and those of the most savage tribes are the most perfect of all. The much-boasted richness of the Greek verb is transcended fivefold by that of the Turkish verb (see p. 48); and in the power of expressing the accompanying circumstances of an action, both are left far behind by many of the polysynthetic tongues of America. The Cherokee, for instance, not content with having a dual and a plural, has two forms of the dual, thus: *galuniha*, I bind it; *inaluniha*, I and thou bind it; *astaluniha*, I and he bind it; *italuniha*, we bind it. If the object bound is animate, the verb is varied to express that. The perfect tense has two forms, one used when the narrator was present at the action, the other when he was absent—thus: *uhlun*, he killed him (in my presence); *uhlei*, he killed him (in my absence).

68. All this betrays a deficient exercise of the faculty of abstraction and generalisation. In the earlier stages of

intellectual development, objects and actions are contemplated in the concrete, and clothed in all their circumstances. To strip an individual image of its accidents, and attend only to what is essential and general, belongs to a later stage. There are tribes, we are told, whose copious vocabulary has a separate name for the tail of each of the animals they are familiar with, and who yet have no name for a tail in general. 'The Choctaw language has names for the black-oak, white-oak, and red-oak, but none for an oak; still less for a tree.'—LUBBOCK'S *Origin of Civilisation*. Specialised conceptions of this kind have a far more vivid and picturesque effect than general ideas, and are still cherished by poets. In the infancy of the race, imagination was dominant; all were poets; and every object stood out life-like, with all its surroundings. Homer cannot think of the Greeks except as 'well-greaved,' even when the greaves seem to us to stand in the way of the general effect of the picture.

69. *Gender*.—The same habit of mind accounts for the origin of grammatical gender. To the primitive man every object in nature is endowed with a will like his own, and personified; and as all real persons are men or women, so every object was invested with the one sex or the other according to some fancied analogy. In the luxuriance of the composite stage of language, the distinction usually found expression in some modification of the terminal vowel.

70. *Classification of the Monosyllabic and Agglutinate Languages*.—No satisfactory classification of the monosyllabic and agglutinate languages has yet been made. This is owing partly to the nature of their structure, and partly to the circumstance that they have been less thoroughly studied. They may be arranged in groups having more or fewer points of similarity; but it has not been conclusively shewn with regard to any group that the members of it are genealogically related—that the features of resemblance are owing to a common parentage. The more cautious school of philologists object to the term 'Turanian Family,' which has been much used to comprise 'all languages spoken in

Asia and Europe (including Oceania), and not included under the Aryan and Semitic families, with the exception of Chinese and its cognate dialects.' They would restrict the term Family to the two genealogical groups, the Aryan and the Semitic. Only in one other case, that of five of the so-called 'Turanian Family,' the Finnic, Samoiedic, Turkic, Mongolic, and Tungusic, would the evidence of family affinity seem to be strong; and even that is spoken of with hesitation. This group has been called the Alatian group or family, from the name applied by the Tatars of Siberia to themselves. As a convenient way of designating the languages which are not Aryan and not Semitic, it has been proposed to call them Sporadic—that is, scattered, or Allophylan—that is, spoken by other different tribes (see Farrar's *Families of Speech*).

71. *Synopsis of the Languages of the Earth*.—On the principles of classification above sketched, the chief languages of the earth may be thus arranged:

(A.) *Monosyllabic or Isolating*.—(a.) Chinese, the typical language of this order. (b.) Tibetan, which shews some beginnings of grammatical forms. (c.) The languages of the Eastern Peninsula—Siamese, Anamese, Burman. Japanese and the language of Corea are doubtful.

(B.) *Agglutinate*.—(a.) The Alatian group above described. (b.) The Dravidian languages spoken in the south of Hindustan (Canarese, Tamul, Telugu, &c.). (c.) North Asiatic (Kamtchatdale, Kurile, &c.). (d.) Malayo-Polynesian group. (e.) African languages. Some of the languages of Africa are allied to the Semitic family, and were introduced by immigration, such as the dialect of Tigré in Abyssinia, and the Arabic dialects spoken by the Mohammedan population of the coasts, and which have even penetrated deep into the interior. How far the Berber dialects are of Semitic character, is a disputed question; and the same is the case with the language of the Gallas in Abyssinia. Little has as yet been done in investigating and classifying the native agglutinate languages of Africa, which have been designated by the common name of Hamitic. The ancient Egyptian, from which the modern Coptic is derived, would

seem never to have got beyond the isolating stage. Some of the languages adjoining Egypt are thought to be allied to the Coptic. The Negro languages, properly so called, of the Sudan, and of the west coast from the Senegal to the Niger, are exceedingly numerous and widely diverse. The languages to the south of the equator are markedly different from those to the north. They fall, according to some, into two great families, the Congo family on the west, and the Kafir family on the east. The Hottentot language is distinct from both. A valuable contribution to the study of part of the field is to be found in Bleek's *Comparative Grammar of the South African Languages* (1862). (f.) The languages of the American Indians. The native languages of the New World are numbered by many hundreds, all differing totally in their vocabulary, but still agreeing in the peculiar grammatical structure which has given the name of Incorporative. Their area is fast contracting, and they seem destined to disappear. (g.) The Basque or Euscara, spoken on both sides of the border between France and Spain towards the west, is remarkable as being without kindred among the languages of the earth. It has more analogies with the native tongues of the New World than with those of the Old; but in many points it seems quite alien even to them. It is believed to be the remnant of the language spoken by the aboriginal inhabitants of Europe before the advent of the Aryans.

(C.) *Inflectional*.—This order consists of two families, the Aryan and the Semitic, so distinct in their grammatical framework that it is impossible to imagine a language of the one family derived from one of the other. It is the peoples speaking these languages that have been the leaders of civilisation within the historic period (see p. 49).

ARE ALL LANGUAGES SPRUNG FROM ONE?

72. *Unity or Diversity of Origin?*—Connected with these radical differences of type, is one of the higher and more speculative problems of the science—the question as to the

common origin of all languages. The inherent and apparently ineffaceable difference of structure in the three orders above described, as well as the absence of all sure marks of genealogical affinity even between the two families of the inflectional type, the Aryan and the Semitic, are considered by some as insuperable objections to the theory of a common origin. But although it may be fruitless to look for extensive identifications of the roots and grammatical forms of the Aryan tongues, even in the oldest forms to which we can trace them, with those of the Semitic, still more with Chinese or Turkish elements; it seems rash and unscientific to affirm that, going back to the radical stage, the development of all could not have begun from a common stock of monosyllabic roots. The wonderful transformations exhibited by language in the course of its known history, seem sufficient ground for maintaining the *possibility* of a common origin. On the other hand, the nature of the case forbids all hope of ever being able to *prove* it. Various coincidences have been pointed out that seem to favour the unitary view, such as Chinese *fu*, Tibetan *pha*, Lat. and Gr. *pa*-ter, Eng. *fa*-ther; Chin. *mu*, Egyp. *mu*, Lat. and Gr. *ma*-ter, Eng. *mo*-ther; but even though they were much more numerous than they are, they might well arise from the mind and vocal organs of man being everywhere essentially the same. Extensive collections have been made of the names of relationship all over the earth, and these shew a great preponderance of the syllables *pa* or *ap* (*ab*) and *ta* or *at* for 'father,' and of *ma* or *am* and *na* or *an* for 'mother.' These syllables, single or reduplicated (*papa*, *atta*; *mama*, *nana*), are so obviously among the first easy articulations of children, that their extensive prevalence is no evidence of a common parentage of the races using them.

MIXTURES OF LANGUAGES AND RACES.

73. *The Relationship of a Language determined by its Grammar.*—On counting the words in one of our larger English dictionaries, it is stated that about 13,000 are of Teutonic origin, while 29,000 can be traced either mediately or

immediately to Latin.* It might seem from this that English ought to be classed along with French, Italian, and Spanish, as one of the Neo-Latin or Romanic tongues. But if we take a page of an English book, and count the words as they occur, an overwhelming majority will be found to be Teutonic. Thus there are only three Latin words in the Lord's Prayer. All the words of most frequent occurrence—the articles, pronouns, prepositions, and auxiliary verbs, together with the names of the most familiar and essential conceptions, without which there could be no communication—are all, or nearly all, from the Anglo-Saxon. The grammatical apparatus of the language, too, is purely of the same origin. From whatever source they may have come, when once adopted into English, a noun forms its plural in *s*, and its possessive in *'s*; a verb has its past tense and past participle in *d*; and an adjective is compared by *er* and *est*. The life-blood of English is thus Teutonic, and this determines its relationship. There is no such thing as a mixed idiom. Whenever two languages come in conflict, by the peoples speaking them being mixed, they may exist distinct side by side for a time, but they always end by one giving way to the other, being either altogether extruded, or in part absorbed and assimilated by the other.

74. *Conflict of Tongues*.—In cases of this kind it is not always the tongue of the more numerous people that carries the day. The Roman armies and officials that conquered and ruled Gaul, were few compared with the native inhabitants; yet the subject Celts had in a few generations entirely given up their own tongue, and taken to speaking Latin as they best could. They felt the superiority of the Romans in culture, and adopted their language as the most direct expression and vehicle of that culture. It was the same with the handful of Sanscrit-speaking Aryans, who, unknown centuries before the Christian era, migrated from Bactria into Northern Hindustan, and imbued the millions

* Other enumerations make the proportion of the Teutonic element greater than that stated in the text. In fact, if we set aside the more strictly technical terms that occur only in books of science and art, and look at the vocabulary of general literature, the Teutonic words are even more numerous than those of Latin origin.

of its previous inhabitants with their language and religion. On the other hand, the Franks and other Germanic tribes who subdued Gaul in the 5th century A.D., were at least as numerous as the Roman conquerors had been ; but this time, the language of the subject people, the Romanised Gauls, was the cultured language ; it was, too, the language of the new religion, to which the heathen Germans soon submitted ; and thus the dominant people dropped their own language, and adopted that of their subjects, infusing into it, however, a good many Teutonic words, still recognisable in modern French (for example, *guerre* = Eng. war, *marche* = Goth. *mark*, a boundary). The disappearance of the Scandinavian tongue of the Northmen who settled in the north of France in the beginning of the tenth century, was still more rapid and signal.

75. *The Norman-French gives place to Anglo-Saxon.*—When the descendants of those Northmen conquered England, only a century and a half afterwards, they were thorough Frenchmen in tongue. This conquest gave rise to another struggle between a Teutonic tongue and the Neo-Latin. In this case, the two were in some respects on an equal footing. The Anglo-Saxon was a cultivated literary language as well as the Norman-French ; and both peoples were Christian, so that neither had to adopt the religion of the other. The struggle was therefore long, and the result doubtful. The French had the advantage of being the language of the ruling class and of the courts of law ; and if, in addition, the subject people had been heathens, and had received their religion from their conquerors, the inhabitants of Britain would, in all probability, have now been speaking a French dialect. As it was, the Norman-French had to yield to the weight of numbers, and be absorbed and assimilated by the Anglo-Saxon. It had to content itself with furnishing about half the vocabulary of the common language now spoken by the united peoples, while its rival furnished the rest, and the mould in which the whole was cast, the grammar. In the effort of assimilation, however, the Anglo-Saxon grammatical forms were dislocated and shattered, and now exist only in a mutilated

form, as compared with the German dialects, which have not come through a like crisis.

ROOTS.

76. Root, in Philology, is that part which is common to a group of allied words—the germ out of which they have all sprung. It is arrived at by taking away the formative parts—the suffixes and affixes, and reversing any change that their presence may have caused. Thus, in *co-in-cid-ence*, the root-syllable is *cid*, the primary form of which in Latin is *cad*, to fall. It is seldom that this analysis can be successfully performed with only one language; in order to get at the true root, the corresponding words in all the languages of the same family must be compared. Thus, in the Eng. words ‘story,’ ‘history,’ ‘historical,’ ‘historically,’ *histor* would seem to be the root; but by comparing the Greek with the Latin and Sanscrit, we arrive at a syllable *vid*, meaning to see or know, of which the Eng. (to) *wit* (wist) is only another form. But even then we are not sure that we have arrived at the original and most simple form. Thus, Eng. *yoke*, Lat. *jugum*, come from the syllable *jug*, to join, seen in Lat. *ju(n)go*, Gr. *zeugo*; and this might be rested in as the root, were there not a simpler form, *ju*, preserved in Sanscrit, and having the meaning of mingling or being together; this, which may be taken as the primary root, gives rise to the two secondary roots or modifications, *jug*, to join, and *yudh*, to fight (that is, to join battle).

77. *Roots of two kinds.*—The roots common to the Aryan languages are always monosyllabic, as *i*, to go; *ga*, to go; *ad*, to eat; *vak*, to speak; *star*, to strew. They are divisible into two classes—the one expressing some action or general property, as in the instances now given; the other indicating relative position, as *ma*, here or me; *ta*, there or that. The one class are called *predicative* roots; the other, *pronominal*. They all expressed primarily some physical notion or relation palpable to the senses; but from these the transition to the impalpable conceptions of the mind is natural and obvious; thus, *vid*, ‘to see,’ served also for ‘to know.’

78. *The Root notion general; that of a Derivative more special.*—The notion expressed by a root-word is always of a very general kind; but by a variety of expedients, such as lengthening the vowel, reduplication of the syllable, prefixing and affixing letters and syllables (many of which at least are evidently pronominal roots), and composition with other predicative roots, one germ gives rise to a whole group of words expressive of the specific applications or limitations of the generic idea—for example, from the root *spac* or *spec* (in Gr. *skep*), to look, have sprung a numerous family of words in the English and other kindred tongues; *spy*, *despise* (to look down upon), *spite* (through old Fr. *despit*), *respite*, *respectable*, *suspicion*, *prospect*, *inspect*, *auspices*, *speculum*, *species* (that is, the appearance or individual form, as opposed to the kind or genus), *spices*, &c. From the root (Sans.) *vid*, (Gr.) *id* or *eid*, (Lat.) *vid*, (Teut.) *wit* or *wis*, there are upwards of a hundred derivatives in the English language alone.

79. *Modes of Derivation—Reduplication.*—It is often difficult to trace any intelligible connection between the modification of the meaning and the modification of the form. The same mode of formation serves a variety of ends, and the same end is effected by a variety of expedients. We can only glance at a few of these. Reduplication of the root, entire or modified, besides expressing past time (see p. 29), could signify repetition of the action, or was used simply for general expressiveness or emphasis—for example, Lat. *dictito*, *memor*, *populus*, *susurrus*, *sisto*, *gigno*, Eng. *gig-gig*, *baby*. Primitive languages delight in reduplication; among savage tribes, almost every syllable is repeated one or more times—for example: Ashanti, *ko-ko*, 'red;' *fu-fu*, 'white;' *bo*, 'to break;' *bo-bo*, 'to break in pieces.' Cree, *tato-pulhu*, 'it is torn;' *ta-tato-pulhu*, 'it is torn to tatters.' Mosquito, *wal*, 'two;' *wal-wal*, 'four.' A distinguished German philologist, Pott, has written an exhaustive treatise on this one point in the physiology of language.

80. *Diminutive Affixes.*—Diminutive affixes appear to have played a large part in word-building. It is easy to see how the notion of smallness would express also tenderness,

affection, pity, contempt; also the relation of child to parent, and the general notion of belonging to or depending upon. Diminutives, used at first as terms of endearment or familiarity, often supplanted the simple names (see p. 21), and then lost their diminutive meaning; on which a fresh diminutive affix was added with the like result, the successive layers becoming amalgamated into one mass. The English diminutive *ock* (for example, *bullock*, a young bull; *playock*, a plaything) seems to be identical with the Greek *ak* (for example, *rod-ak*, a dwarf-rose; *noss-ak*, a chick), the Lat. *ec* or *ic* (for example, *sor-ec*, a shr w-mouse), and the Celtic *ach*, *ag* (for example, *bann-ach*, a small bun, the Scottish bannock). *T* often takes the place of the guttural, as in *emmet*, for the older form *emm-ock*, *apricot* for *apri-cock*. *El* is a very prevalent diminutive affix, often interchanging with *er* and *en*. Compare Ger. *fess-el*, *st pf-el*, with Eng. *fett-er*, *stopp-er*. Lat. *as-in(us)* and *as-ell(us)*, and Ger. *es-el*, are all diminutives of the simple name, which has disappeared from these languages, but still survives in Eng. *ass*. The Italian *fratello* and *sorella* have supplanted the Latin *frater* and *soror*; but Professor Key ingeniously suggests that *frater* and *soror*, along with *pater* and *mater*, are themselves diminutives of affection which had supplanted still simpler forms. The diminutive of *maid* is *maid-en*, which in German becomes *m d-ch-en*, with twofold diminution. Of the same kind is English *cat-k-in*. Acorn is in Ang.-Sax. *aec-er-en*, a double diminutive of *aec*, oak, and has nothing to do with corn; compare Ger. *eich-el*. The guttural affix *ig* has passed in Scottish into *y*, or rather *ie*; and hence arise such diminutives of the second power as *wif-ock-ie*. As if this were not satisfactory, a cluster of diminutive terms is often prefixed—for example, a wee wee bit *ass-ock-ie*. The German parallels this in one word, *es-el-in-ch-il-in*. Diminutive affixes occurring in verbs naturally express the repetition of small effects, as *tickle*, from the root of ‘touch’; ‘game,’ *gamble*. They enter also as formative elements into adjectives, expressing continuation of the act or state, or a partaking of the attribute—for example, Ang.-Sax. *miht*, might; *miht-ig*, mighty.

81. It is instructive to trace the process of derivation among savage nations. The expedients they fall upon to convey their meaning are ingenious enough, but the connections of the ideas often appear to us extremely far-fetched and fanciful. They serve the purpose, however, and that is enough for the language-makers. One expedient is to give the word a form that explains itself by a kind of pictorial effect. Thus, among the Botocudas of Brazil, there is a word, *ouaton*, meaning 'a stream;' and this, by drawing out the last syllable (*ouaton-on-on-on*) is made to signify 'the sea.' On the same principle, another tribe make their word for 'six,' *itawuna*, do duty for 'seven,' by pronouncing it *itawuuna*.

82. *Attenuation of Meaning—auxiliary and substantive Verbs.*—Auxiliary verbs expressed originally, and most of them still express, some palpable act or state. *I have*, is 'I hold' or 'possess.' In 'I have a letter written,' it is implied, along with possession, that the act of writing is finished; and in 'I have written a letter,' the idea of possession vanishes, and attention is fixed on the finished act. *I will*, again, is equivalent to 'I wish;' but an act that I merely wish to do, is of necessity not yet done, but may be expected, and thus *will* dwindles into a mere symbol of future time.

83. *The substantive Verb.*—The verb *to be*, and its equivalents in other tongues, originated in a similar attenuation of meaning. Ital. *stato*, Fr. *été*, 'been,' are from the Lat. *statum*, the participle of *sto*, 'to stand;' and *exist*, itself, means, etymologically, 'to stand out or be prominent.' Eng. *be*, Lat. *fu*, is identical with Gr. *phy*, 'to grow;' and *am*, *is*, &c. (in Sansc. *as-mi*, &c.), is derived by Max Müller from a root *as*, signifying 'to breathe.' It seems to be established that no word in any language had for its primary function to express mere existence; and what is more, a great part of the languages of the world never have had anything of the nature of a substantive verb. 'The auxiliary verb "to be" is entirely absent in most American languages, and the consequence is, that they turn almost all their adjectives and nouns into verbs, and conjugate them

through all the tenses, persons, and moods.'—LUBBOCK. In the monosyllabic languages, position is made to indicate predication. Thus, in Chinese, the words *fu*, 'man,' and *ta*, 'great,' which, when arranged *ta fu*, mean 'a great man,' become, when transposed, *fu ta*, 'the man is great.' In many, at least, of the agglutinate languages, when the words that seem to stand for our *to be* are examined, they are found to be simply pronouns or particles indicating time, place, or manner. The Coptic makes the demonstrative *pe*, 'this,' stand for *is*, and *ne*, 'these,' for *are*. Even the Semitic languages, which have substantive verbs, habitually employ pronouns instead of them. 'Thou art my king' (Psalm xlv. 4), is in the Hebrew, 'Thou *he* my king;' 'We are the servants of the God of heaven' (Ezra v. 11), is in Chaldee, 'We *they* servants,' &c.; 'I am the light of the world,' is in Arabic, 'I *he* the light of the world.'

A good illustration of the predicative or affirmative power of pronouns and particles is furnished by Eng. *yes*, and the corresponding words in the other European languages. *Yes* (Ang.-Sax. *gese* or *yea*, Ger. *ja*) is merely an oblique case of a demonstrative pronoun (Sansk. *ya*), and means simply 'in this (manner),' or 'thus.' The Ital. *sì* (*yes*) is from Lat. *sic* (thus); the Provençal *oc* is from Lat. *hoc*; and the modern French *oui* was originally *hoc illo* (thus, thus), and passed through the stages of *oel* and *oil* into its present form.

84. *The Nature of the Verb.*—It is the essence of a sentence to assert or predicate something, and as this power seems to lie exclusively in the verb, it has been supposed that into the composition of verbs there must have originally entered some peculiarly vital element of which other parts of speech were destitute. The most careful analysis shews no trace of such an element. How verbs were formed may be inferred from the languages of savage tribes, in which the structure is often very transparent. Thus, in the Fiji language, '*loma*,' literally denoting "heart," and metaphorically "mind," "will," is regularly employed in conjunction with the genitives of the personal pronouns in the sense of the Lat. *volo*—for example, *loma-qu*, literally heart of me = I will; *loma-munu* = thou wilt; *loma-na* = he will; *loma-mudou* = ye

will or wish' (see Garnett's *Philological Essays*, page 291). In various other tongues, ordinary nouns in construction with pronouns correspond exactly to the form of the verb. For example, compare Wotjak *pi-i*, son of me, or my son, *pi-my*, son of us ; with *bera-i*, I spoke (lit. speech of me), *bera-my*, we spoke. In the inflectional languages this structure has been obscured by decay, yet many traces of it are still discernible ; Gr. *didomi*, *didosi*, was nothing more originally than 'gift of me,' 'gift of thee' (we might even imitate the reduplication and say, 'gif-gaf-of-me,' 'gif-gaf-of-thee').

85. *The Number of Roots not great.*—It requires but a few germs to produce, by the processes above described, the most copious vocabulary. The 50,000 words of the Chinese dictionary are formed from 450 roots ; those of Hebrew and of Sanscrit are reckoned at about 500 ; and there are probably not many more in English.

ORIGIN OF LANGUAGE.

86. Having seen how words grow or are built up, and traced them back to their roots, a still further question presents itself : how, namely, these roots, this raw material of language, came first into existence ? Although this question is purely speculative, it is more attractive to most minds than the more matter-of-fact inquiries we have been considering. It was, in fact, the question with which all inquiries into the nature of language began ; and in recent years a whole crop of treatises on it, by the most distinguished philologists of the day, have made their appearance. As was inevitable in a matter of the kind, diverse views are advocated ; we can only afford to state, briefly, and with as little controversy as possible, the view that seems to us the most reasonable.

87. *Why Man speaks.*—Man speaks because he thinks and feels, and, being a social animal, has a desire to communicate his thoughts and feelings to his fellows. The impulse to utterance of some kind, either of gesture or vocal sound, seems instinctive ; and a sound uttered repeatedly in connection with a particular object or impres-

sion, would become by association a sign or symbol of that object or impression. Even the lower animals, some of them at least, seem able to go a little way in this direction. But man alone possesses the faculty of analysis and abstraction necessary to convert such marks of individual things into symbols of more generalised conceptions—to make them words instead of mere animal sounds.

88. *Words how far necessary to Thought.*—The necessity of words to think in is much insisted on by speculators on this subject, as being the motive-power in the generation of language; and no doubt it is true that, without language, thought could advance but little, if at all, beyond what is manifested by the brutes. But when they argue as if this necessity of having his ideas objectively depicted, in order to exercise his own reason, would impel an individual man to construct a language for his own use, they make the unwarranted assumption that, under any circumstances, even though he grew up from infancy in solitude, the thinking powers of a human being must of necessity develop themselves. The necessarily few facts that bear on the case look the other way. Observation rather favours the opinion, that man in solitude—if he could exist in solitude—would be as mute as the lower animals. The social nature of man helped to give birth to the germs of speech, no less than his rational nature. An instinctive desire to give a sensible sign of his impressions to his fellows, was perhaps the primary impulse; the aid thus given to his own thinking powers, a secondary result.

89. *The two Theories—the 'Ding-dong,' and the 'Bow-wow.'*—The main question in this speculation is—what determined particular vocal sounds to be first uttered in connection with particular objects and ideas? One view is, that the conscious nature of man responded to the impressions made upon it, as a solid body, such as a bell, does when struck, and thus produced a number of 'phonetic types,' which formed the roots of language. This is known as the 'ding-dong' theory, and is unsupported by any facts or positive arguments. The analogy of the bell does not hold; unless we could find one that gave out a different.

note for every object it was struck with. Any inherent correspondence between any one conception of the mind and a particular articulate sound is out of the question. As little can we think of the choice of an audible mark being altogether arbitrary or fortuitous. The sound uttered must have been suggested by something connected with the object or action itself; and by what more naturally than by the inarticulate sound which the object or action emits?

90. *Imitative Words*.—Every language contains numerous words evidently formed on this imitative principle, such as *cuckoo*, Lat. *cucu(lus)*; *pee-wit*, Dutch *kie-wit*; *cock*; *clash*; *rap*; *tap*; *quack*; *rumble*; *whiz*; *clang*. In the preface to Wedgwood's *Dictionary of English Etymology* an immense array of words of this nature in various languages is collected. In the more fixed and cultivated languages, phonetic decay has obliterated all traces of mimetic origin in the great mass of the vocabulary; it is among savage nations, where a language perishes and is renewed in a generation or two, that the process is best seen. It is copiously illustrated in Tylor's *Primitive Culture*, pages 145—217. *Mu mu* expresses 'dumb' among the Negroes of West Africa, as *mum* with us. The same articulation with altered meanings runs through a multitude of tongues. *Njam* in the Negro-English of Surinam means 'to eat,' and *njam-njam* is 'food;' and in Australian *gnam-ang* is 'to eat.' The Australians call their throwing-stick *wirri* from its 'whirring' sound; and their word for 'to knock' is *pitapitata* (compare *pit-a-pat*).

Words evidently formed in imitation of natural sounds are often called *onomatopoeitic* (from a Greek word *onomatopoiia*, the invention of names), and the theory that all language began in this way, is known as the 'Onomatopoeitic Theory.' A simpler and more appropriate term is 'Mimetic,' or its English equivalent, 'Imitative.'

91. The chief objection to the mimetic theory is, that if the first words were merely reproductions of natural sounds, the same natural objects would have had the same names all the world over. To which it is answered, that the mind in its first efforts at naming did not seek an exact repro-

duction of the sound, but a suggestive imitation ; primitive words were not echoes, but 'artistic representations.' Now, the sounds of nature are not simple, but composite. Like other concrete phenomena, they present a variety of aspects ; and according as one or another aspect seemed the most prominent to the observer, a different vocal sound would suggest itself as the appropriate symbol. Thus, when Professor Max Müller argues (*Science of Language*, London, 1861), that if the 'bow-wow' theory, as he nicknames it, were true, men would have everywhere spoken of a *moo*, as is done in the nursery, and not of a *cow*, it seems a valid answer to say, that the Indian *gu*, the Teut. *kuh* (Eng. *cow*), and the Græco-Lat. *bou-*, are really as suggestive imitations of the animal's actual voice as *moo*. To take a more striking instance : few words differ more in sound and aspect than the Eng. *thunder* (Ger. *donner*, Lat. *tonitru*, Fr. *tonnerre*) does from the Mexican name for the same thing, *tlatlaitnitsel* ; and yet it would be difficult to say which is the more suggestive of the natural sound.

92. It is no doubt true that the great bulk of names in the Aryan and Semitic tongues are derived from roots having a general predicative power ; but this by no means excludes the principle of imitation. Thus, to take one of those instances adduced by Professor Max Müller himself, that of *raven* or *crow* (Sansc. *kārava*, Lat. *corvus*, Gr. *korōnē*) ; this is derived from the root *ru* or *kru*, which means to cry or call, and the bird was called a *kārava*, or *crow*, not in imitation of his voice, but because he was 'a shouter, a caller, a crier. The name might have been applied to many birds, but it became the traditional and recognised name of the crow.' But how came the articulation *ru* or *kru* to be chosen to convey the general meaning of crying or calling ? May we not suppose that it was suggested by the voice of birds of the crow kind, whose notes are most markedly cries or calls to their fellows, as distinguished from singing ? Once adopted in this particular case, it would naturally be extended to any kind of cry or call, from the harshest to the softest.

In the case of ideas unconnected with any natural

sound, names would readily be suggested in many cases by analogies, real or fancied, with things that were attended by sounds (for example, a *loud* colour).

93. *Words derived from Interjections.*—The imitative theory by no means excludes the view that words may grow out of those natural involuntary exclamations—those *ahs* and *ohs* and *poohs*—which seem produced by a reflex action of the emotions on the outward organs. It is highly probable that the natural organic expression of disgust, *ugh!* gave rise to Eng. *ugly*, Old Eng. *ugsome*. Eng. *woe* is clearly cognate with the Latin and Greek interjections *vae* and *ouni*.

94. *Marks of Imitation obliterated.*—But although language may have had its first beginnings in this way, it is hopeless to look for traces of onomatopœia in the great bulk of the words of any modern tongue. We have seen how a general name for ‘calling’ might arise from an imitation of the crow’s voice. The operation of this principle, and that of phonetic change, which makes it impossible to say what the very earliest form of a root may have been, are sufficient to account for the absence of such traces, except in comparatively rare instances.

The student who wishes to pursue the subject farther is referred to the following works: Max Müller, *Lectures on the Science of Language* (2 vols. new edit. 1871); Farrar, *Chapters on Language* (new edit. 1873), and *Families of Speech* (new edit. 1873); Whitney, *Language and the Study of Language* (1868), and *The Life and Growth of Language* (1875); Garnett’s *Philological Essays* (1859); Earle’s *Philology of the English Tongue* (2d edit. 1873); Professor Key’s *Origin and Development of Language* (1874). The great German authorities are Bopp, Pott, J. Grimm, Schleicher, Steinthal, Diez. Renan has a treatise in French on the origin of language, and has treated the comparative grammar of the Semitic tongues. Tylor (*Primitive Culture*, 1871) and Lubbock (*Origin of Civilisation*—2d edit. 1870) are rich in illustrations of the languages of savages.

QUESTIONS.

Section 1. What is language (1) in its widest sense, and (2) in ordinary usage? Is it written or spoken language that is the subject?

2. In what sense is language *artificial*? What is natural language?

3. What are the two objects in the study of languages?

4. Is the language of a people permanent in form? What may it be compared to?

5. Have we the means of studying any language in embryo?

6. What gives the study its importance? What names have been given to it?

7. Account for the failure of Greek speculation on language.

8. What obstructed modern scholars at first?

9. What was the beginning of comparative philology? What name stands highest among the labourers in this field?

10. What determines the *pitch* of the voice?

11. How do vowels and consonants differ?

12. What is the fundamental vowel? and how are the others derived from it?

14. Define a check, and give the two series. How do the *flats* differ from the *sharps*?

15. How are the continuous consonants produced?

16. What are liquids?

17. Write out a classified table of consonants.

19. Are languages altered intentionally?

20, 21. Give instances of the three kinds of change.

23. How does euphemism affect language?
26. What is phonetic decay? What causes it?
- 28, 29. Give examples of phonetic decay in modern English and in French.
31. How is decay connected with the life of language?
32. What is necessary to make a single word out of two?
33. Explain the more common English affixes.
34. What was the nature of the primitive affixes? Explain the personal endings of the early verbs, and the plural of nouns. What is *vi* in *amavi*? Explain the structure of *aimerai*.
35. What was an early expedient for expressing past time? How did a change of vowel, as in *fell* from *fall*, come to signify past time? Account for the English affix *d* or *ed*.
36. What is happening to the possessive case in English? Give instances of the ossification of formative affixes. What expedient is now employed in English instead of the once prevalent adjective termination *en*?
37. Illustrate assimilation and dissimilation.
40. Do all languages follow the same laws in the changes of their words? Give illustrations.
- 41, 44. What is a dialect? What causes check divergence? How does a standard dialect arise? Are dialects corruptions?
- 45—46. What is a *family* of languages? What is the most important family? Name its several stocks, and the individual languages of each stock. What is the meaning of *Aryan*?
47. What are the two chief marks of affinity between different tongues? Give instances of identity of grammatical forms still surviving in European tongues. Are two words to be held as identical because they have the same sound? Why not?
48. What is Grimm's Law? What does *d* in Latin become in English, &c.? Give other examples than those in the book.
49. Exemplify the interchanges of letters between German and English.
51. How might a tribal dialect arise in the nomadic state?
52. Give instances of national peculiarities of articulation.
53. Give instances of identity of words under disguise.

54. What classes of words are the same in all the Aryan family?

55, 56. Is any one of the Aryan tongues the mother of the rest? What was the mother-tongue? Do we know where and when the parent nation lived? Do we know anything about it? and how?

57. What languages compose the Semitic family?

58. Is there any connection between the Aryan family and the Semitic?

59. What is meant by the genealogical classification of tongues? What is the other principle of classification? Describe the isolating type.

60—63. Describe and contrast the three types.

64. Are the distinctions absolute? State what is really meant.

65. Explain the terms synthetic and polysyllabic. What process is now going on in English and other European tongues?

66. Does the loss of inflections impair a language? Give examples of benefit arising from this loss.

67. What languages are richest in inflections? Give an example from the Cherokee.

68. What habit of mind gives rise to such cumbrous grammatical distinctions.

69. Account for the origin of grammatical gender.

70. In what condition is the classification of the monosyllabic and agglutinate languages? Are the Turanian languages a family? What are the Alatyan tongues?

71. Give the chief groups of tongues belonging to each of the three types.

72. State some arguments for and against the opinion that all languages have had a common origin.

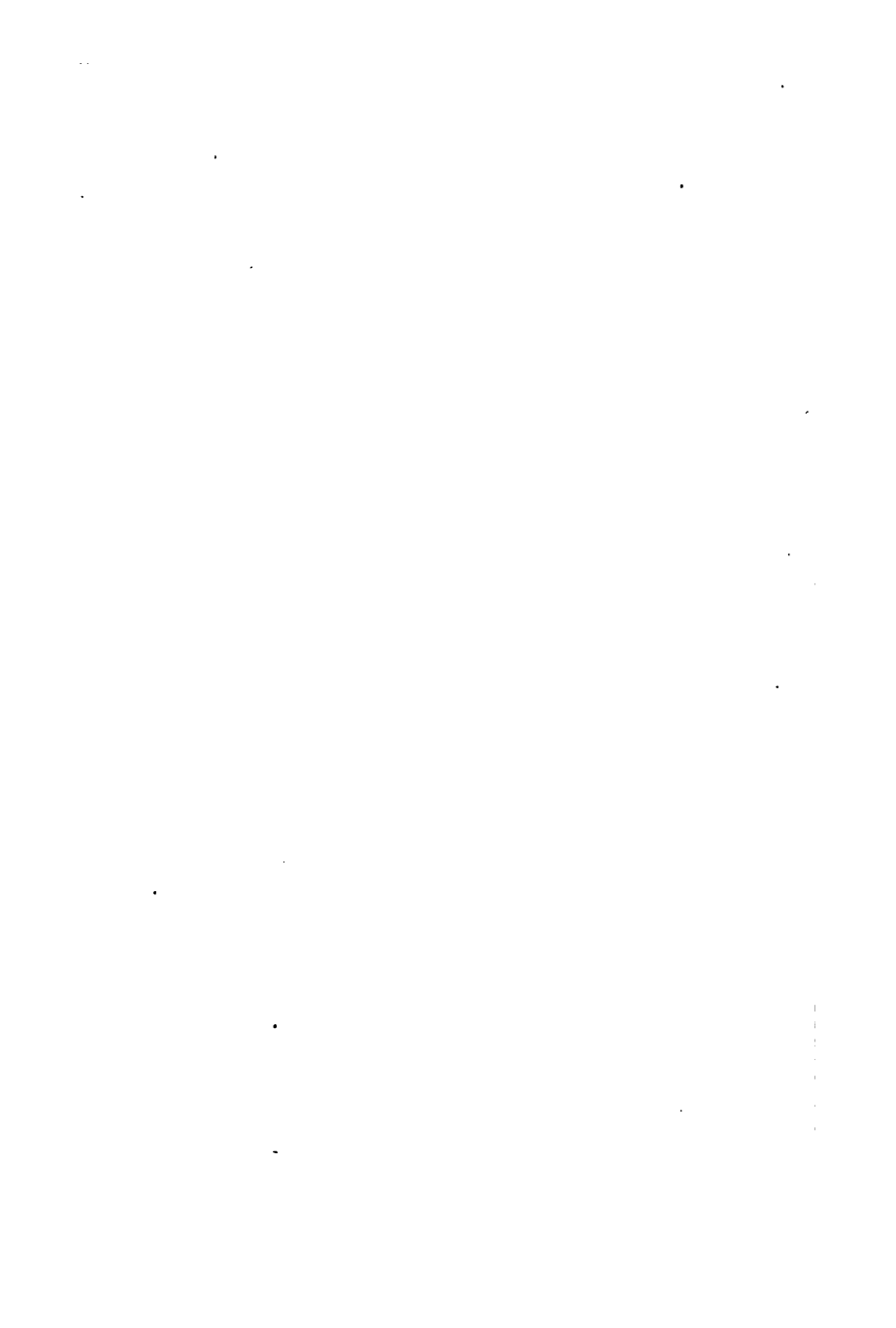
73. Since there are more words of Latin origin in an English dictionary than there are of Teutonic, is English not a Romanic tongue? If not, why not?

74, 75. Give instances of a conflict of tongues, and the results.

76. How is the root-syllable of a word found? Can we ever be sure of having got at the original form?

77. What are the two kinds of roots?
78. How does the notion or meaning of the root differ from that of a derivative?
79. Does the same mode of derivation always modify the meaning in the same way? What uses does reduplication serve? In what languages is reduplication most prevalent?
80. What are the uses of diminutive affixes? How came one diminutive affix to be added to another? Give instances of diminutive affixes in verbs and adjectives.
81. Where may the processes of derivation be best studied?
- 82, 83. Explain the origin of auxiliary verbs, and of the verb *to be*. How is its place supplied in some tongues? Explain *yes*.
84. Explain the nature of the verb.
85. How many roots are there in English?
- 87, 88. From what impulse or impulses does man speak?
- 89, 90. What first suggested the names of objects? What is the imitative theory called? What is the 'ding-dong' theory? Give examples of imitative words.
91. What is the chief objection to the mimetic theory? Answer it. On that theory, how may we suppose that ideas unconnected with any natural sound were named?
93. What other source of words is there?
94. Why are marks of mimetic origin wanting in most words?

THE END.



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